Methodology of creating a neighborhood where identity can evolve
Applied design scenario in Makiki

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Submitted towards the fulfillment of the requirements for the Doctor of Architecture Degree.

University of Hawai'i at Mānoa
School of Architecture

Doctorate Project Committee
David Rockwood - Chairperson
Geoffrey Lewis
Patrick Onishi

Acknowledgements

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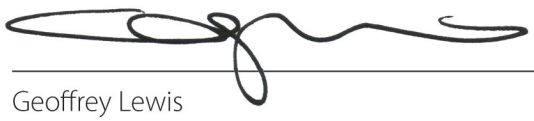
We Certify that we have read this Doctorate Project and that, in our opinion, it is satisfactory in scope and quality in fulfillment as a Doctorate Project for the degree of Doctor of Architecture in the School of Architecture, University of Hawai'i at Mānoa.

Doctorate Project Committee

David Rockwood - Chairperson



Geoffrey Lewis

Patrick Onishi

Chapter 1: Problem statement and Project description

1. Problem statement

Lack of identity

Many of the neighborhoods in the United States don't have a strong identity. When I visited Denver for a Transit Oriented Development field study, I saw a number of new neighborhood developments close to downtown and also in the suburbs. Public right of ways are nicely laid out with concrete sidewalks and trees. Houses are nicely built next to each other. There are some parks and open spaces. There were retail stores for daily needs. However, after observing 5 or 6 neighborhoods, I got bored because they look all the same. If the neighborhoods lack identity, some of it can be attributed to the commodification of architectural typologies associated with corporate entities and their ubiquitous distribution across the country, making places more alike in order to market a consistent brand identity. Home and even community has been turned into a commodity as well, less linked to a physical place. The development of a community is less about the relationship fostered between people and more about what is developed by a corporation. The social and psychological link to place is secondary.

Figure 1: Typical suburban single family housing in Denver (Source: Author)

Figure 2: Typical suburban low-rise apartment in Denver (Source: Author)

Honolulu has a similar problem. Neighborhoods in Honolulu used to have their own character, but they have become homogeneous. This homogenization is mainly caused by developers desire to maximize profits and planners use of repeatable housing models. Developers want to maximize the density in the most efficient way to make money and they cannot put too much effort on creating what people really need. Planners have their ideal model for neighborhoods and it does not necessarily apply to every neighborhood. Street types should be suitable for the variety of people's needs and behavior. Various types of housing and retail stores should be provided for people with various cultural backgrounds. There should be different types of gathering space for different activities. Neighborhoods need an identity.

What is an identity for a neighborhood? It is a factor that makes the neighborhood unique. Is it truly pleasant for people to live in a neighborhood that looks like any other neighborhood? Can people be strongly attached to the neighborhood that does not have any special characteristics? Having an identity is significant for people to love their neighborhood. When they care about their neighborhood, its quality will be improved. For example, people stop throwing rubbish because they care. The neighborhood stays clean and criminal rate will decrease. This phenomenon is proved by the decrease in criminal rate in New York when they cleaned all the graffiti in subways. [1]

The focus of this project is the Makiki neighborhood in Honolulu. Population is growing, but the land is limited in Honolulu. As a future direction, it is inevitable to consider that the neighborhoods will increase in density. The population of Makiki is 29,700 according to the 2000 Census. The density in the section between Punahou and Ke'eaumoku streets is about 61,000 persons per square mile, which is the third densest place in the state behind Waikiki and sections of Salt Lake. Given that the city standard for community-based parks is 2 acres per 1,000 residents, Makiki is 45 acres short of public parks. [2] Figure 4 below shows how big 45 acre is in relation to the whole area of Makiki.

Figure 3: Existing Public Parks in Makiki
(Source: Author)

Figure 4: Existing + 45 acres of Public Parks in Makiki
(Source: Author)

1. Malcolm Gladwell: *The Tipping Point, Little Brown, Boston, c2002*
2. James Gonser: *Urban challenges confront Makiki, Honolulu Advertiser, January 9, 2005*

Makiki is a great place to investigate and test the possibilities of creating an identity in a highly dense neighborhood. The location of Makiki is convenient to conduct the field study as I have been living in Makiki for more than 2 years and I am very familiar with this neighborhood. I am attached to Makiki because of its location and sense of neighborhood. Makiki is close to everywhere I need to go such as University of Hawaii, work, Ala Moana Shopping Center, and other retail stores and restaurants. However, I have to drive to those destinations and I hope that there may become some places I could walk to. Makiki also has some sense of a neighborhood. It is relatively dense. There is a mixture of high, mid, and low-rise apartments and single family housing and some churches. However, Makiki does not have a strong character and identity, and has room for improvement.

Makiki is a very interesting neighborhood because of its mixture of low, mid, high-rise apartments and single family housing types and its cultural diversity. However, it is losing its identity because there are only few places for the neighbors to meet and interact. The core of the factor that makes an identity is people. However, they cannot relate to each other because there is not enough public space in Makiki. There are highly dense places that have identities such as Tokyo or Paris because there is a variety of public space. When there is sufficient public space, people will gather, share their cultures, and care more about their own neighborhood. Although the amount of public space is necessary, the quality of public space is also important. The good quality public space forms the cultural identity and provides a sense of place for local communities. It is one of the improving issues of this investigation to determine how the quality of public space can be achieved.

Makiki as a new central urban area

Makiki could be one of the new central urban areas capable of accommodating the growing population in Honolulu. There are existing central urban areas in Honolulu such as Waikiki and Downtown. However, Waikiki is tourist oriented and Downtown is business oriented. Kaka'ako has been developed in recent years and is becoming a new central urban area with large entertainment facilities and high-rise condominiums. What we need next is a new central urban area that is different from Waikiki, Downtown, or Kaka'ako. It can be a new central urban area that has a sense of a friendly neighborhood with a human scale for everyday life.

Figure 5: Waikiki, Downtown, Kaka'ako, and what is next? (Source: Web - Google images)

Mixed use

Mixed use could be introduced as a primary strategy to provide an infrastructure to form an identity. Mixed use was a practical result of the demand to efficiently utilize buildings and provide housing above commercial uses. Today, mixed use developments meet the same demand for efficient use of resources, especially when they are vertically integrated with housing above offices or retail. Residents of mixed use are able to walk to work or shop beneath their apartment building or condominium. People in Honolulu are used to driving their cars to get what they need and what they cannot get in their neighborhood. If the neighborhood serves what the residents need, they do not have to go to the next neighborhood. When there are more people walking on the street rather than driving cars, there are more opportunities for people to interact. When people stay more in the neighborhood, the identity will develop. Moreover, mixed use provides more places where people can gather such as cafés, restaurants, or retail stores. Therefore, mixed use is one of the key factors to create an identity in Makiki.

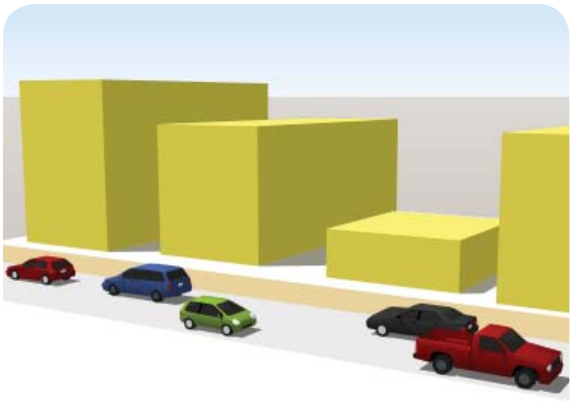


Figure 6: Single use - Car oriented life (Source: Author)

Figure 7: Mixed use - Pedestrian oriented life (Source: Author)

Every neighborhood has unique development patterns, economic conditions, and demographics that impact how these developments are built. It is important to investigate how Makiki should be developed. One of the challenges of modern mixed use is the complexity of attracting and planning different income producing uses such as housing, retail, and office. These uses actually help secure the development by spreading out higher costs among those different tenants.

Mixed use developments are single developments consisting of different uses that are intentionally integrated. The uses must be integrated physically and functionally in order to truly be considered mixed-use. Physical integration allows access to each use through common areas, sidewalks, and shared parking and amenities. Functional integration allows dissimilar uses to operate successfully side-by-side and can prevent conflict between uses. Ideally, functional and physical integration leads to a better sense of place and more pleasant environment for users.

Current land use patterns

As defined by Land Use Ordinance, Makiki is zoned as follows:

- A-1 (Low-density Apartment District) - 1%
- A-2 (Medium-density Apartment District) - 70%
- A-3 (High-density Apartment District) - 1%
- R-5 (Residential District) - 2%
- BMX-3 (Community Business Mixed Use District) - 20%
- B-1 (Neighborhood Business District) – 0.1%
- P-2 (General Preservation District) - 6%

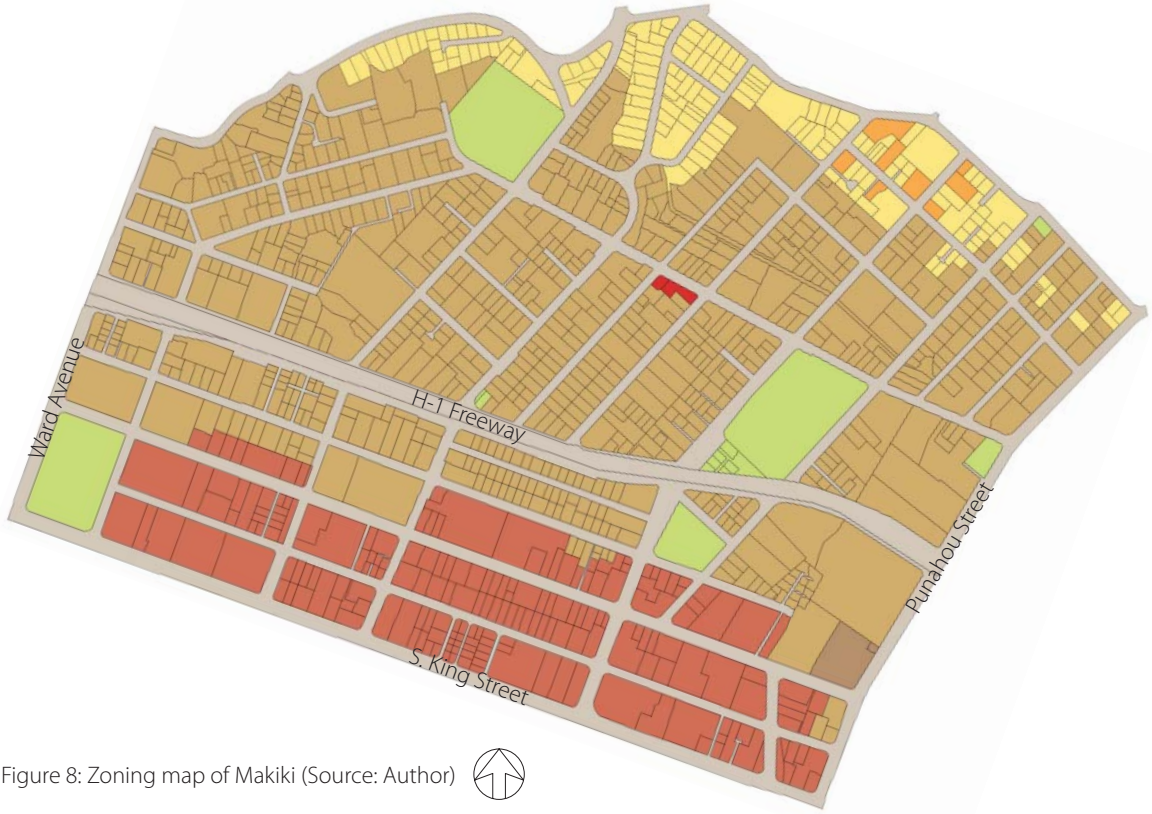


Figure 8: Zoning map of Makiki (Source: Author)

Approximately 70% of Makiki is zoned as A-2. Makiki is basically divided into two areas by the H-1 Freeway. Makai side of the H-1 Freeway is mostly zoned as BMX-3 acting as a transitional zone between the commercial area beyond and the residential area in Makiki. There are only two parcels zoned as B-1 in the entire Makiki. These two parcels are used as Makiki Shopping Village and it is apparently not enough to serve the entire Mauka side of the H-1 Freeway.

Current condition in Makiki

- Lack of identity (homogenization)
- Lack of public space (quantity + quality)
- Lack of anchor facilities and services such as a grocery store, recreation facilities or cafés
- A number of low-rise apartments were built in 1960's and 1970's
- Low-rise apartments with single use are not as efficient as mixed use
- Land owners are looking for the greatest return on their property because of the high property tax and high quality value
- Major means of transportation is the automobile (dependency on the automobile)
- Current residents prefer low to mid-rise apartments because they are afraid that high-rise buildings may destroy the streetscape and the friendly residential atmosphere (According to the residents at Makiki neighborhood board meeting)
- New projects are mainly high-rise apartments because new developers want to make a profit by providing more units in the structure
- Makiki is under pressure to increase density because of the growing population

Proposed condition in Makiki

- Mixed use could act as a primary strategy that provides an infrastructure to form an identity
- Old buildings could be demolished for new mixed use development
- Mixed use has a potential to meet the high quality value, as buildings could be efficiently utilized to provide multiple uses and activities
- Future transit system could change the way of living (car oriented to pedestrian oriented)
- High-rise buildings could also achieve great streetscape and pedestrian friendly environment
- High density zoning encourages large scale projects to take advantage of the higher densities

The current condition will be analyzed in depth in the following chapters in order to investigate the methodologies to create an identity followed by the detailed proposed condition in a neighborhood in general as well as the applied design scenario in Makiki.

2. Project description

The main purpose of the project is to investigate how to create an identity in a neighborhood in Honolulu. Introducing medium to high density mixed use is a primary strategy that provides an infrastructure to form an identity. The intent is to come up with implementation strategies that will promote developments compatible with the existing neighborhood and the needs of current residents in Makiki as well as in other urban communities. The last step is to apply the strategies into the actual site of Makiki as a design scenario to see the possibilities of how they could work.

Research

- History of Makiki
- Current land use and zoning
- Demographics of Makiki
- Site analysis and existing conditions of Makiki
- Definition and history of mixed use
- Existing mixed use prototypes
- Case study of mixed use and great public places
- Identity making factors and elements

Implementation Strategy - Zoning

- Maximum building area and density (existing + proposed)
- Parking requirement (existing + proposed)
- Height regulation and setback (existing + proposed)

Implementation Strategy - Design Guideline

- Introducing mixed use
- Secondary feeder system
- Parcel consolidation
- Parking
- Cultural diversity
- Diversity of architectural style and building types
- Landscape
- Storefront

Applied design scenario in Makiki

- Large scale design (overall plan, density, etc.)
- Medium scale design (parking, public space, etc.)
- Small scale design (architectural style, landscape, storefront, etc.)

3. Project site and history

Site

Makiki is located in Honolulu Hawaii, not far from the center and heart of the City. It is located at the base of Tantalus with Punchbowl on Ewa side. Makiki extends from South King Street to Nehoa Street in the Mauka (mountain) to Makai (ocean) direction and from Punahou Street to Ward Avenue in the Diamond Head to Ewa direction.

Figure 9: Site map of Makiki (Source: Google Earth, reproduced by Author)

The site is located in the heart of Makiki. Makiki is divided into two areas by the H-1 Freeway and these two areas are not related to each other. Makai side of the H-1 Freeway is mostly zoned as BMX-3 and it already has a character of a commercial district. Buildings are mostly used for office and retail and it does not have a sense of residential neighborhood except for the area with a number of mid-rise apartments between the H-1 Freeway and Kinau Street.

In order to achieve the sense of a friendly neighborhood with a human scale, it is necessary to have a residential atmosphere. Mauka side of the H-1 Freeway is mostly zoned as A-2 and has more potential to introduce mixed use development with a sense of residential environment, as this area already has a strong residential character. Therefore, the main focus of the study area is from the H-1 Freeway to Nehoa Street in the Mauka to Makai direction and from Punahou Street to Pensacola Street in the Diamond Head to Ewa direction with Wilder Avenue as a main spine of the study area.

Figure 10: Enlarged site map of Makiki (Source: Author)

Wilder Avenue is the main street of this neighborhood with the residential buildings, parks, community gardens, church, small retail stores, and fire station. There is a mixture of different cultures and there is also a variety of residential buildings such as single family houses, low-rise apartments, mid-rise apartments, and high-rise apartments. There are a number of potentials that makes Makiki a unique place, but it is not working well partially because Wilder Avenue does not provide an enjoyable and walkable environment.

History

The Makiki neighborhood has a grand historical past. Makiki was originally filled with taro fields at one time. In the 1800's Hawaii's most prominent second generation Missionary families built their mansions along Punahou Street. And as the community grew, churches, fire stations and schools were built along Wilder Avenue. Today some of these same churches and schools still exist along Punahou Street and Wilder Avenue. Makiki continues to be a well populated mix of low, mid and high-rise apartments, single family housing, churches, schools and parks. Makiki started to expand in the late 1950's and 1960's. Increased population caused Makiki to increase in density. The first high-rise apartment was built in 1958.

The sketch below by Punahou student James Campbell in 1849, shows the clutch of thatched school buildings enclosed in an extensive lava rock perimeter wall. This sketch was made near what would become Wilder Avenu and Manoa Road.

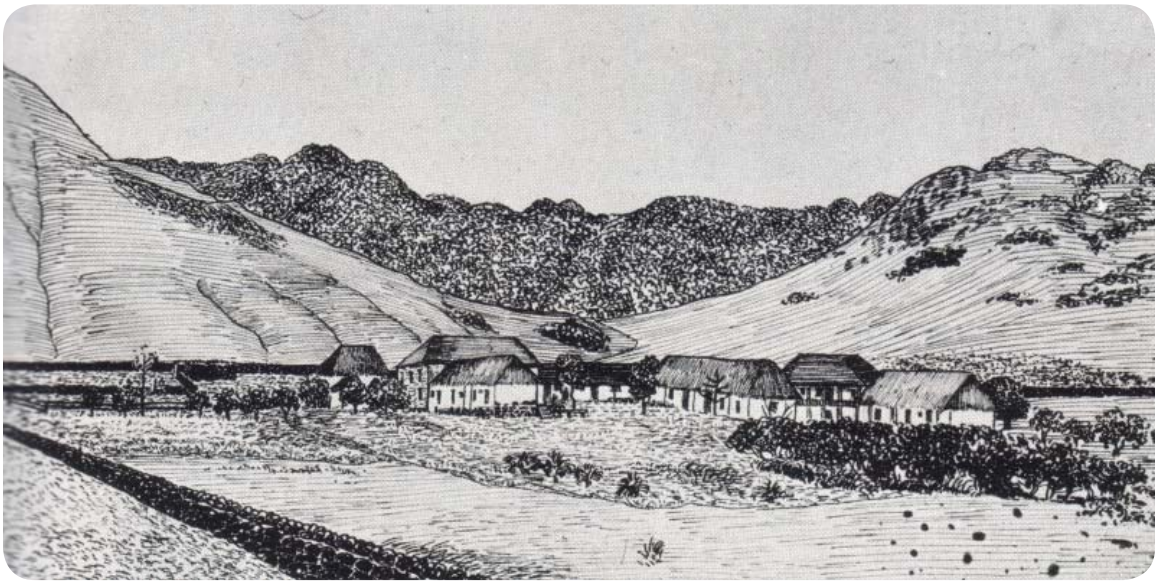


Figure 11: Old Makiki (Source: The Saga of the Sandwich Islands)

Figure 12: Irwin Shepherd Home
(Source: The Old Honolulu)

1879-1898

Irwin Shepherd Home

The Shepherd house was built just before the turn of the century for Frank Dodge, then Superintendent of the Bishop Estate, and was purchased by Dr. Irwin Shepherd in 1916. It was constructed with large, solid timbers. The Shepherds, who had paid the record price of 35 cents per square foot for the property, had the house re-wired and added the driveway, porte-cochere and garage. It was a simple two-story house with the side and back porches partially enclosed. [1]

Figure 13: Saint Clement's Church
(Source: Author)

1898

Saint Clement's Church

The Parish of Saint Clement celebrated its first service on Easter Day, 1898 and was consecrated as a church of the Protestant Episcopal Church of the United States in 1910. The present church building was under construction when Pearl Harbor was attacked on December 7, 1941. Construction was halted until the U.S. Army granted permission to finish the structure to be used as a hospital. The building was completed and consecrated in 1942. [2]

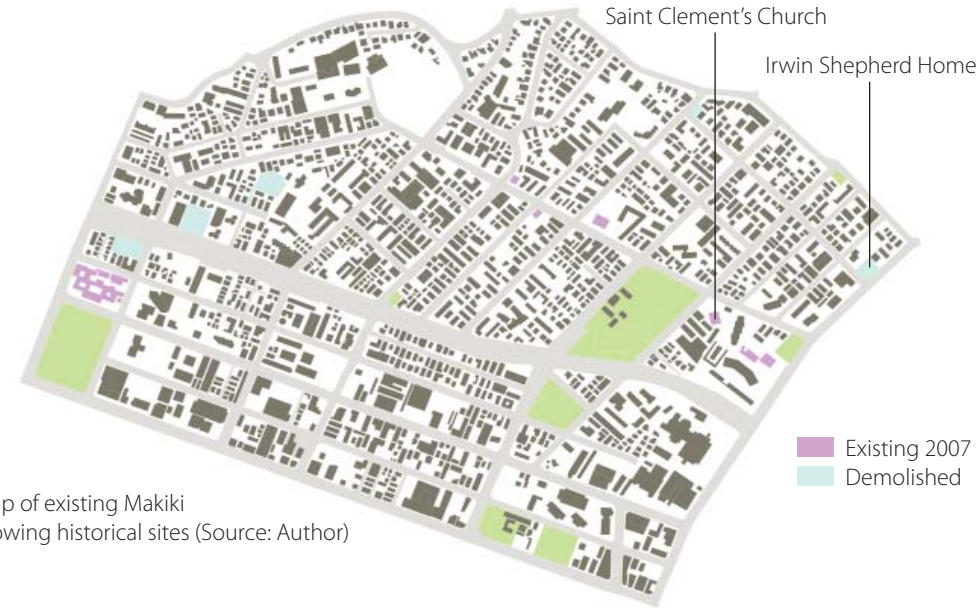


Figure 14: Map of existing Makiki
showing historical sites (Source: Author)

1. Frances Jackson: *The Old Honolulu, Historic Buildings Task Force, Honolulu, 1969*
2. Saint Clement's Website

Figure 15: S. T. Alexander Home
(Source: The Old Honolulu)

1899

S. T. Alexander Home

The work of an Oakland, California architect, this home was built for missionary descendant S. T. Alexander, then also and Oakland resident. The house is a shingled Victorian with a typical high, swooping roofline, scooped wrap-around porch and porte-cochere, and high dormer windows framed with decorative scalloped shingles. The porch is arrayed with turned newel posts and Doric columns. [1]

Figure 16: Davies-Dole Home
(Source: The Old Honolulu)

1899

Davies-Dole Home

A cedar-shingle Victorian reminiscent of the Eastern shingle houses of McKim, Mead and White, was built for George Davies. In 1919 pioneer pineapple planter James Dole bought the home. A boxy three-story structure has a magnificent turret, a nicely detailed porte-cochere, a huge porch with flattened arches and a great central hall [1]

Figure 17: Map of existing Makiki
showing historical sites (Source: Author)

1. Frances Jackson: *The Old Honolulu, Historic Buildings Task Force, Honolulu, 1969*

Figure 18: F. J. Lowrey Home
(Source: The Old Honolulu)

1899

F. J. Lowrey Home

The old F. J. Lowrey home was an angular Victorian with a cut blue stone foundation, half round enclosed lanai and wide overhanging eaves supported by brackets. An interesting feature was the pair of squared towers with metal balconies which gave the whole house a Spanish look. The building was headquarters of the Hawaii Tuberculosis and Respiratory Disease Association until it was torn down in 1969 to make way for an apartment house. [1]

Figure 19: H. F. Wichman Home
(Source: The Old Honolulu)

1902

H. F. Wichman Home

An exuberant gingerbread Victorian with familiar octagonal tower, this home was built for Honolulu jeweler H. F. Wichman in 1902. It is a versatile exhibit of wood carpentry work, including wood slat grills over basement vents of various sizes, decorated half round gable vents, intricate porch railings and a wooden awning with scalloped edges. [1]

Figure 20: Map of existing Makiki
showing historical sites (Source: Author)

1. Frances Jackson: *The Old Honolulu, Historic Buildings Task Force, Honolulu, 1969*

Figure 21: Scottish Rite Cathedral
(Source: Author)

1922

Scottish Rite Cathedral

Scottish Rite Cathedral has nothing to do with Scotland. Nor is it a church, as the word "cathedral" may imply. The building was built by the Christian Science organization, and, that same year, became the Scottish Rite Cathedral, home to the Scottish Rite Masons, one of a handful of lodges of free and accepted Masons in Hawaii. [1]

Figure 22: First Church of Christ Scientist
(Source: The Old Honolulu)

1923

First Church of Christ Scientist

This church is a distinguished example of Hawaiian ecclesiastical architecture. It was designed by Hart Wood, an architect who pioneered in adapting traditional architectural styles and building materials to Hawaii's climate and heritage. The church has a serene beauty derived from a restrained use of natural materials. Note especially the blending of rough lava rock found on the site with gray cement in the beautifully detailed Gothic entrance. [2]

Figure 23: Map of existing Makiki
showing historical sites (Source: Author)

1. Jenny Quill: *Our Town - Scottish Rite Cathedral, Honolulu Magazine, September 2006*
2. Frances Jackson: *The Old Honolulu, Historic Buildings Task Force, Honolulu, 1969*

Figure 24: Honolulu Academy of Arts (Source: The Old Honolulu)

1927

Honolulu Academy of Arts

Honolulu Academy of Arts is a great example of what has come to be know as "Hawaiian architecture" designed by an architect, Bertram Goodhue. This style is characterized by a high peaked roof, a modification of the grass house profile, that extends over wide verandas connecting single-depth rooms. Beautifully landscaped open courts are surrounded by the galleries. The layout is reminiscent of the pavilion plan of Chinese homes. [1]

Figure 25: Makiki Fire Station (Source: Author)

1929

Makiki Fire Station

Mission/Spanish Revival style fire station was built by an architect Solomon F. Kenn, Robert McMillian Co. This building was built at a cost of $33,833.50. [2]

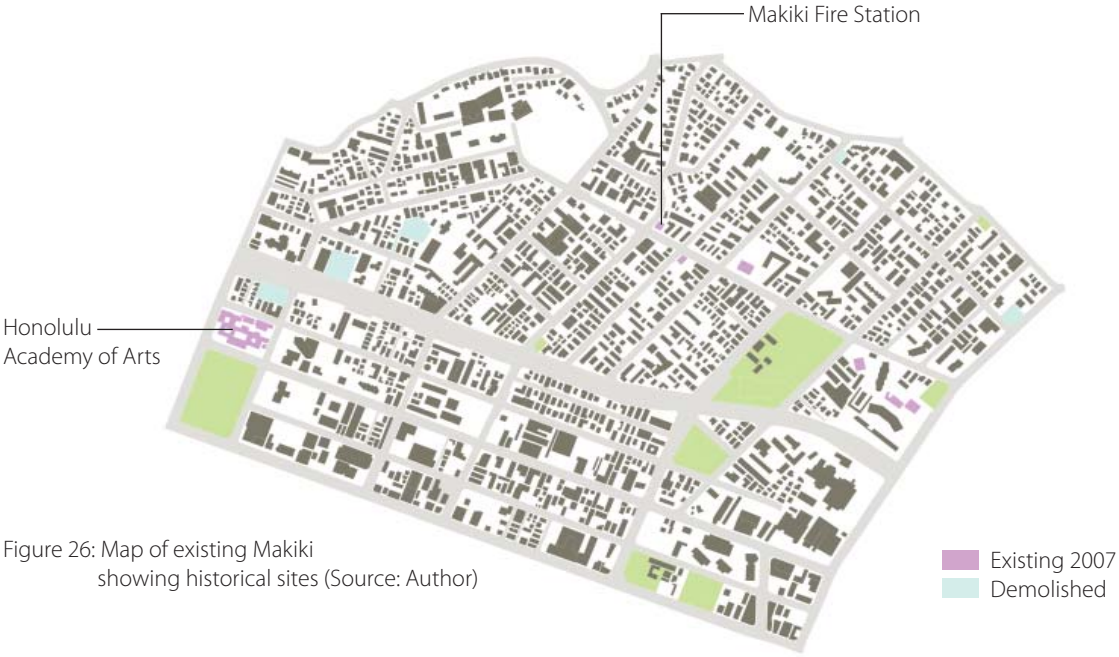


Figure 26: Map of existing Makiki showing historical sites (Source: Author)

1. Frances Jackson: *The Old Honolulu, Historic Buildings Task Force, Honolulu, 1969*
2. Website - National Register of Historic Places

The street car system on Wilder Avenue was built in 1902 by Brill Company. The picture below was taken at the corner of Piikoi Street and Wilder Avenue. This ten-bench, single truck, monitor-roof car featured double running boards, long grab handles for outside passenger standees and a single trolly pole. In back of the electric street car, is the residence of Mr. and Mrs. August Ahrens on the ewa-makai corner of Piikoi Street and Wilder Avenue. [1]

Figure 27: A pause at Piikoi and Wilder
(Source: The Saga of the Sandwich Islands)

Figure 28: Piikoi and Wilder Today
(Source: Author)

There are some other historical buildings around the periphery of Makiki. One is Old School Hall in Punahou School. It is a two-story, permanent coral and stone school house built in 1851. Another is Makiki Pumping Station. It is a simple, one-story rectangle of reinforced concrete with concrete window grilles, incised inscription and a bronze-studded wooden door. The pumping station is attractive in itself and is set unobtrusively in a large landscaped park which Honolulu's Board of Water Supply maintains for neighborhood recreation. This is only one of several garden stations designed by Hart Wood and developed by the public utility. [2]

Figure 29: Old School Hall, Punahou School
(Source: The Old Honolulu)

Figure 30: Makiki Pumping Station
(Source: The Old Honolulu)

1. Edward B. Scott: *The Saga of the Sandwich Islands, Sierra-Tahoe Pub. Co., Lake Tahoe, Nev., 1968*
2. Frances Jackson: *The Old Honolulu, Historic Buildings Task Force, Honolulu, 1969*

Chapter 2: Analysis of the urban characteristics of Makiki

1. Demographics

In order to create an identity in Makiki, it is important to understand the existing condition in Makiki. What kind of people live in Makiki? What are the cultural backgrounds of the residents in Makiki? What kind of buildings are there in Makiki? The demographic study has two objectives. The first step is to determine what segments or subgroups exist in Makiki. The second step is to create a clear and complete picture of the characteristics of a typical member of each of these segments. Once these profiles are constructed, they can be one of the factors to develop planning and design schemes.

As of the 2000 Census, the population of Makiki was 29,700 and consisted of 47.7% males and 52.3% females. Almost 60% of the population of Makiki was in the age range of 25 to 64, which means a lot of them are working and yet not retired.

Gender

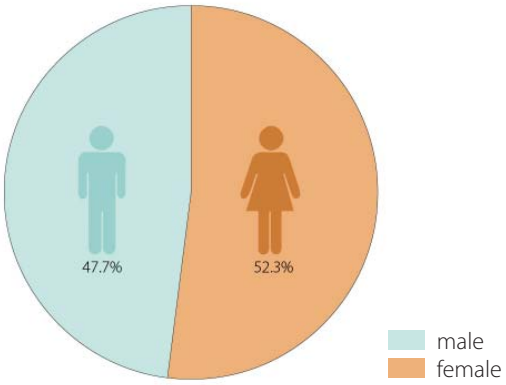


Figure 31: Gender distribution in Makiki based on Census 2000 (Source: Author)

Age

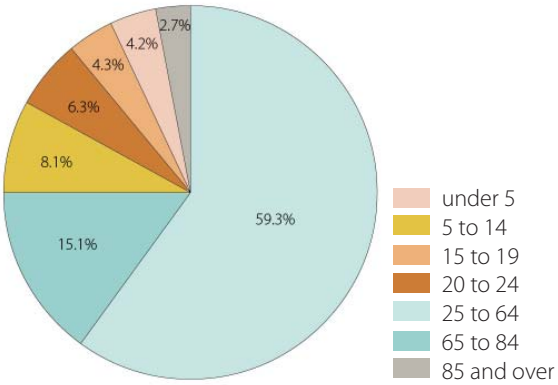


Figure 32: Age distribution in Makiki based on Census 2000 (Source: Author)

Cultural background

The cultural background of the residents in Makiki is very diverse. Another finding is that the majority of the residents have Asian background.

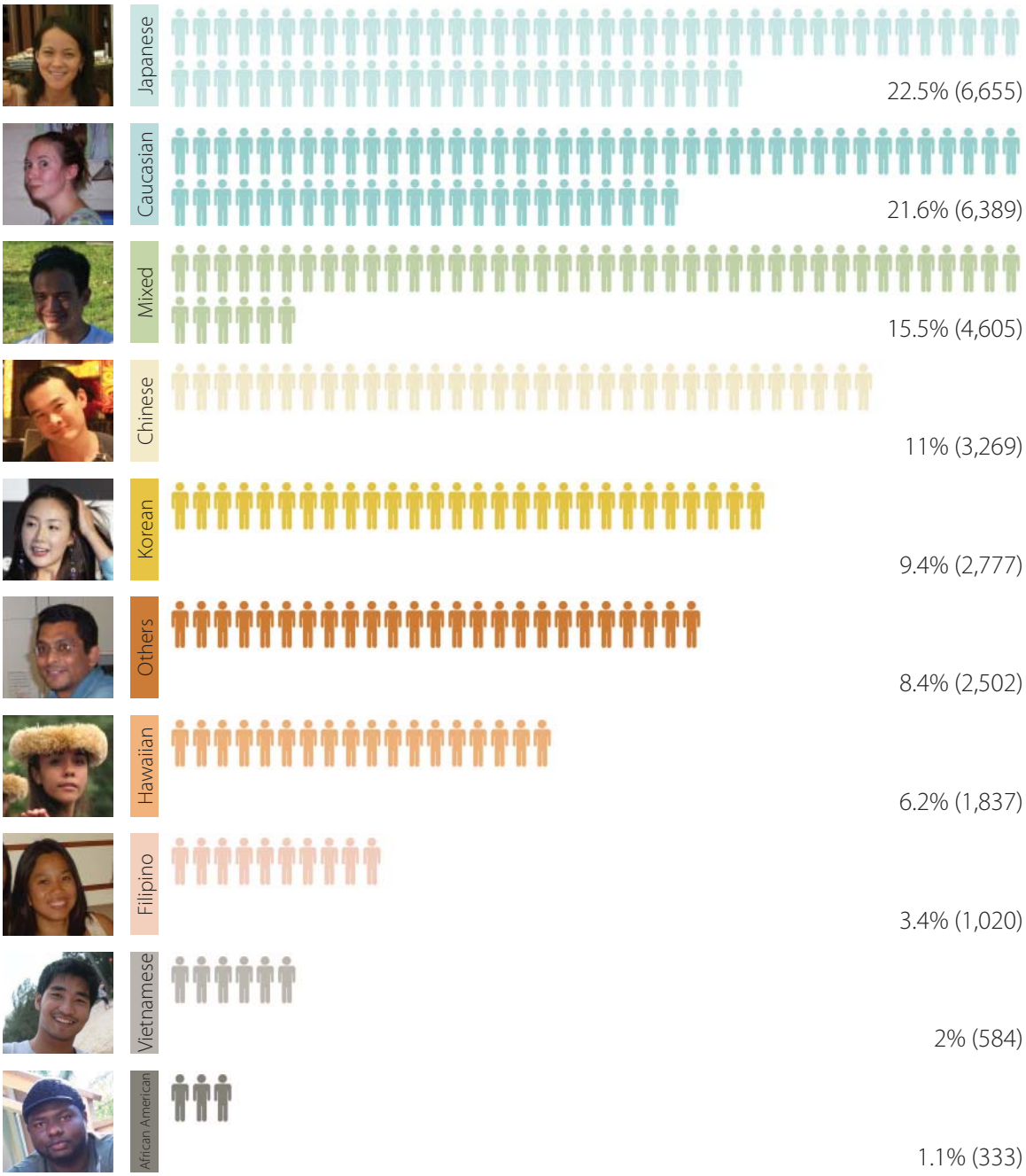


Figure 33: Cultural background distribution in Makiki based on Census 2000 (Source: Author)

Place of Birth

Almost half of the population of Makiki was born in Hawaii. It is interesting that there are more people who were born in a foreign country than people who were born in other state in the U.S. This data explains the reason of cultural diversity in Makiki.

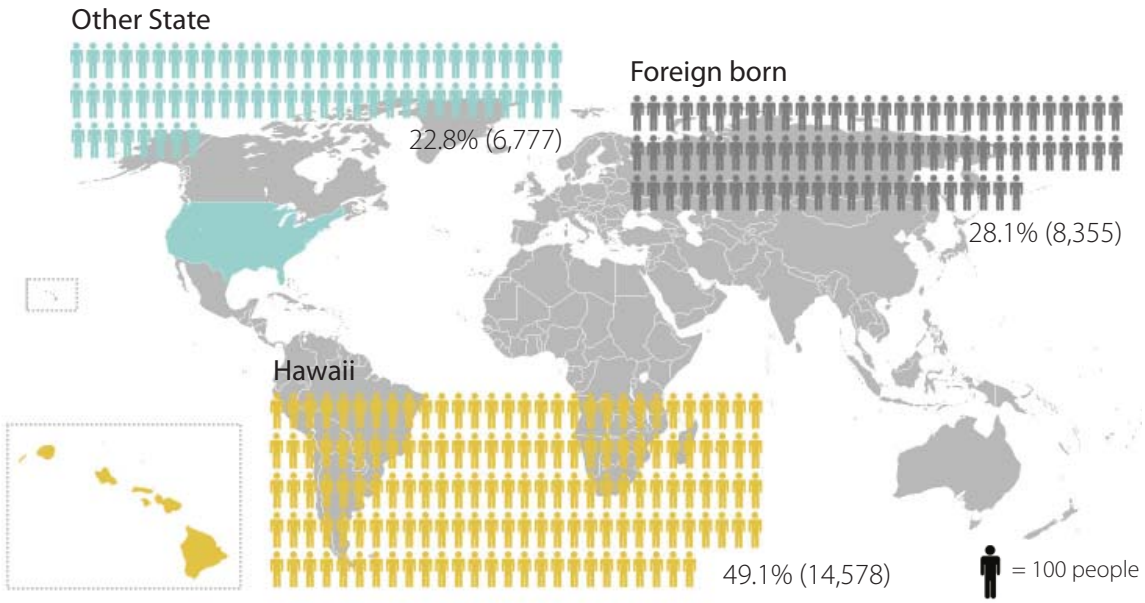


Figure 34: Place of birth distribution in Makiki based on Census 2000 (Source: Author)

Household type

More than half of the population of Makiki is non-family household, which could mean a lot of them are relatively young and do not have a family, and they are transient people. Another statistics shows that 60% of the population of Makiki rent their place instead of owning it. This statistics also tells that there are a number of transient people in Makiki.

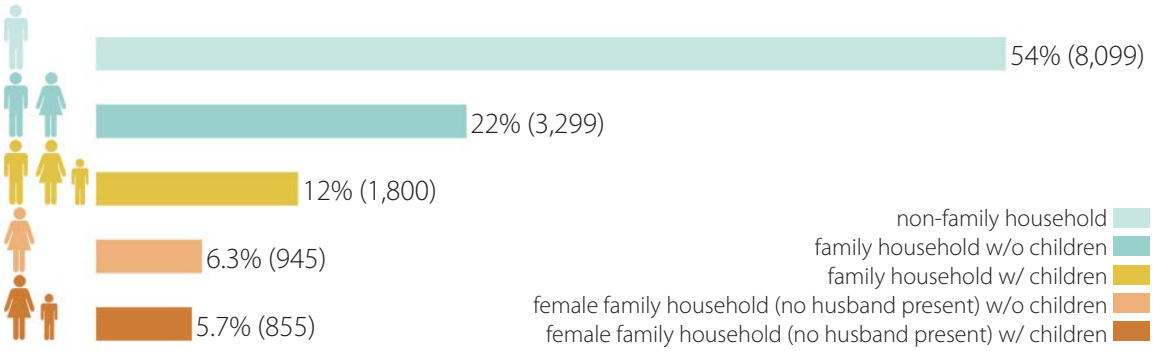


Figure 35: Household type distribution in Makiki based on Census 2000 (Source: Author)

Units in housing structures

More than 60% of the units in Makiki are accommodated in structures that have 20 or more units. This data shows that the density in Makiki is relatively high and most of them are apartments. However, this does not show if apartments are low-rise or high-rise because a low-rise apartment can accommodate more than 20 units.

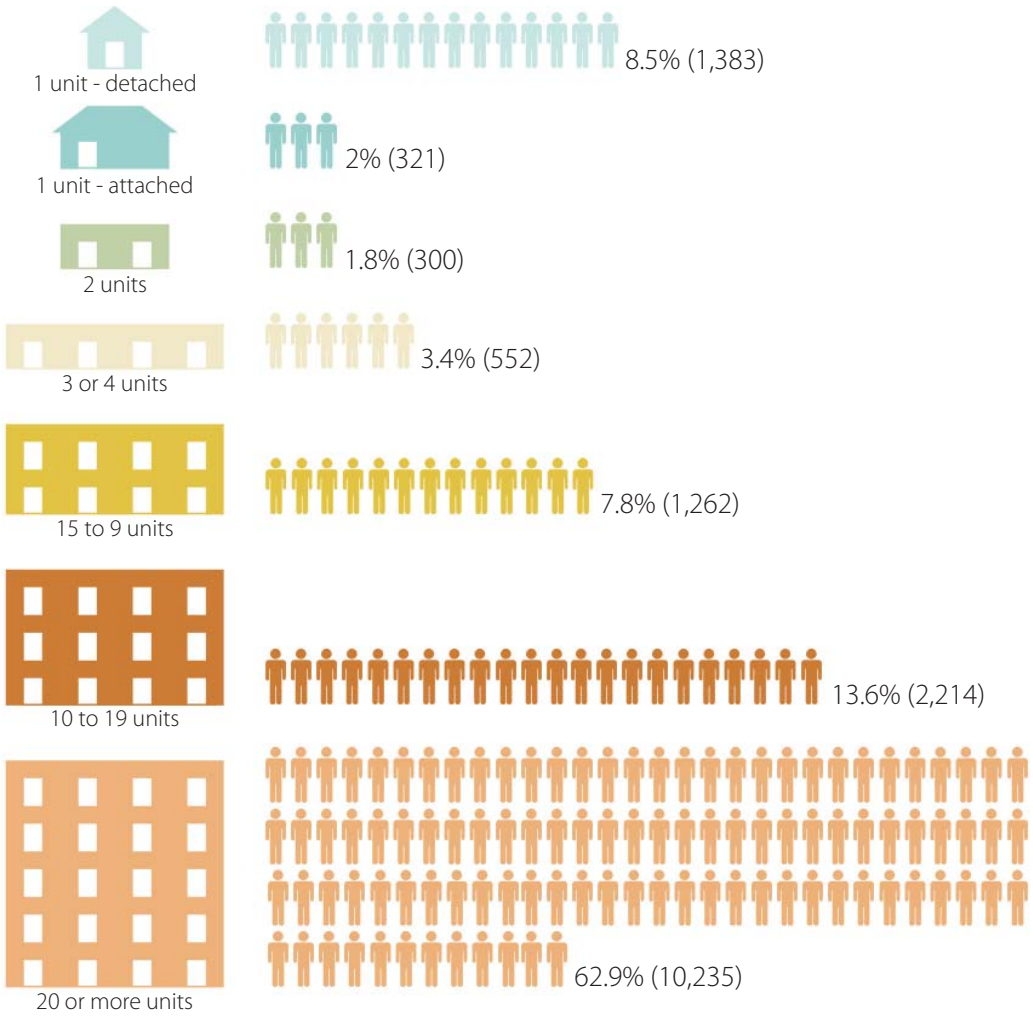


Figure 36: Units in structure distribution in Makiki based on Census 2000 (Source: Author)

Year built

More than 60% of the structures in Makiki were built in 1960's and 1970's as may be seen in some of the apartment's characteristics. Approximately 20 % of the structures are more than 50 years old. Average building longevity is 50 years depending on the level of maintenance. Those old structures that are obviously out of shape could be demolished to construct new buildings as they are not visually pleasant.

Figure 37: Building characteristics of 70's (Source: Author)

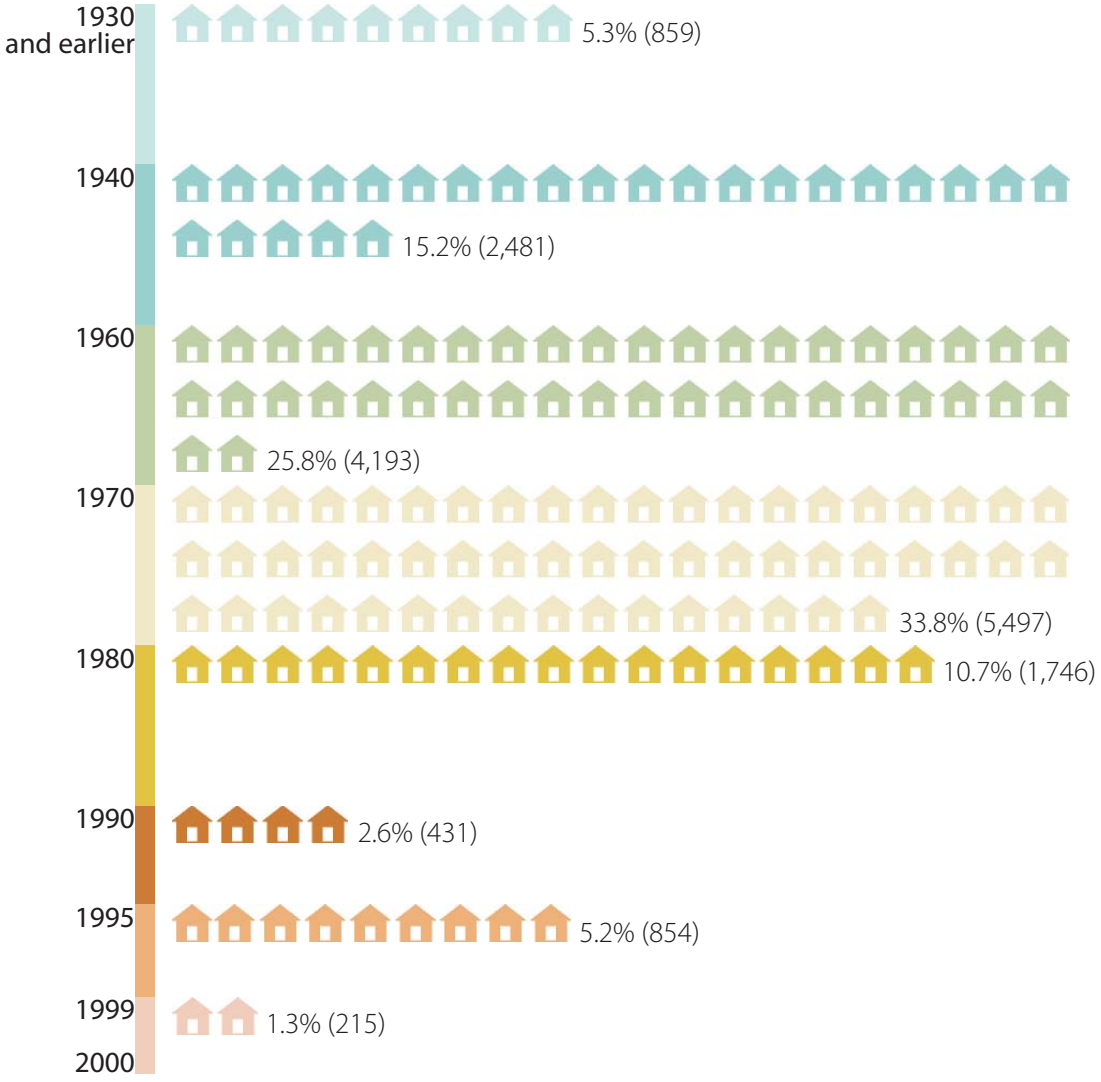


Figure 38: Year built distribution in Makiki based on Census 2000 (Source: Author)

= 100 units

Household income

According to the figure below, the income distribution is diverse. This fact is one of the reasons why there is a mixture of different types of residential buildings. There are walk-up apartments for low-income people, standard apartments for mid-income people, and high-end apartments for high-income people.

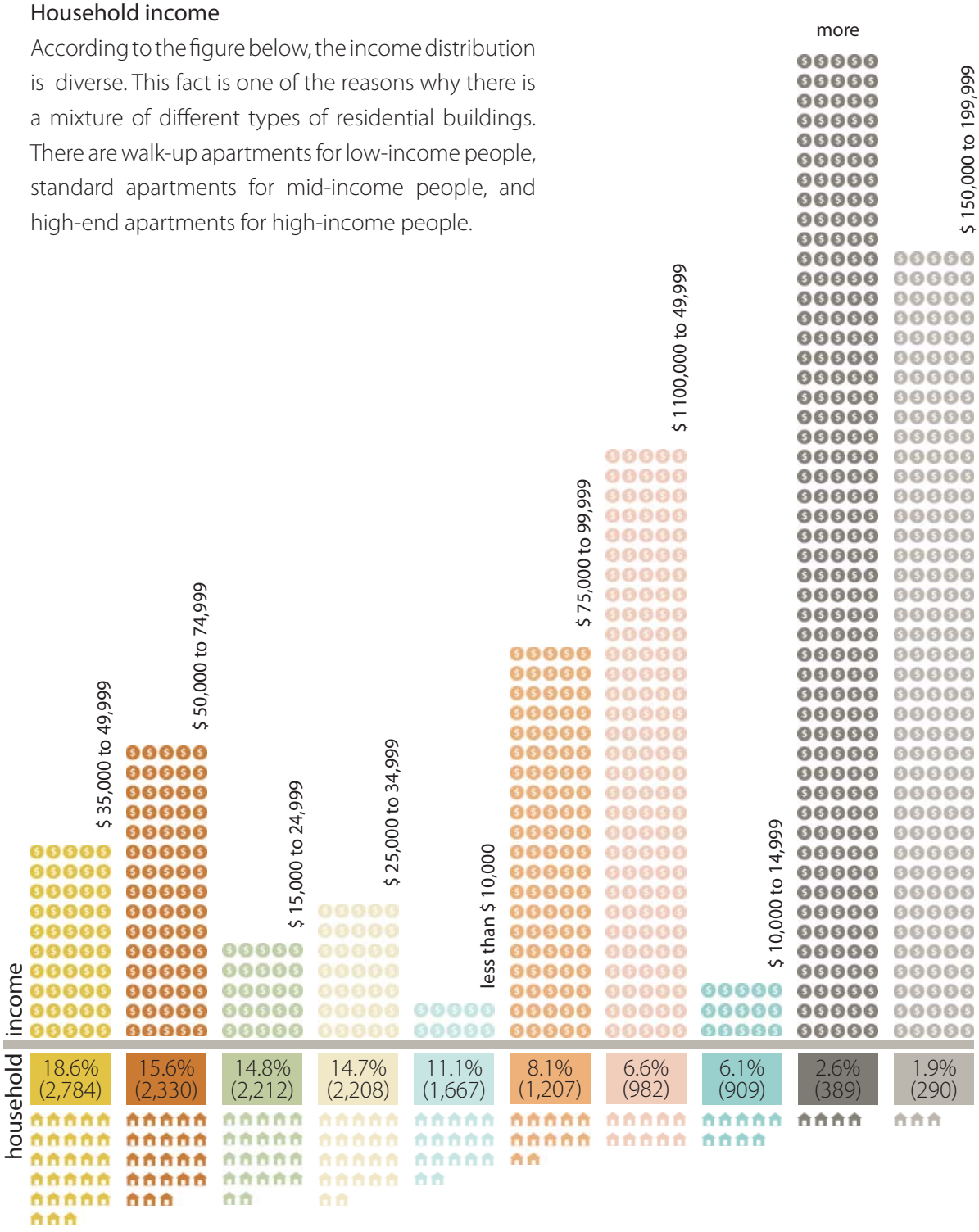


Figure 39: Household income distribution in Makiki based on Census 2000 (Source: Author)

Means of transportation to work

More than half of the workers in Makiki drive alone to work. Introducing mixed use in Makiki gives the neighbors more opportunity to work at home (live/work situation) or walk to work. This helps Makiki reduce the traffic and create a pedestrian friendly neighborhood.

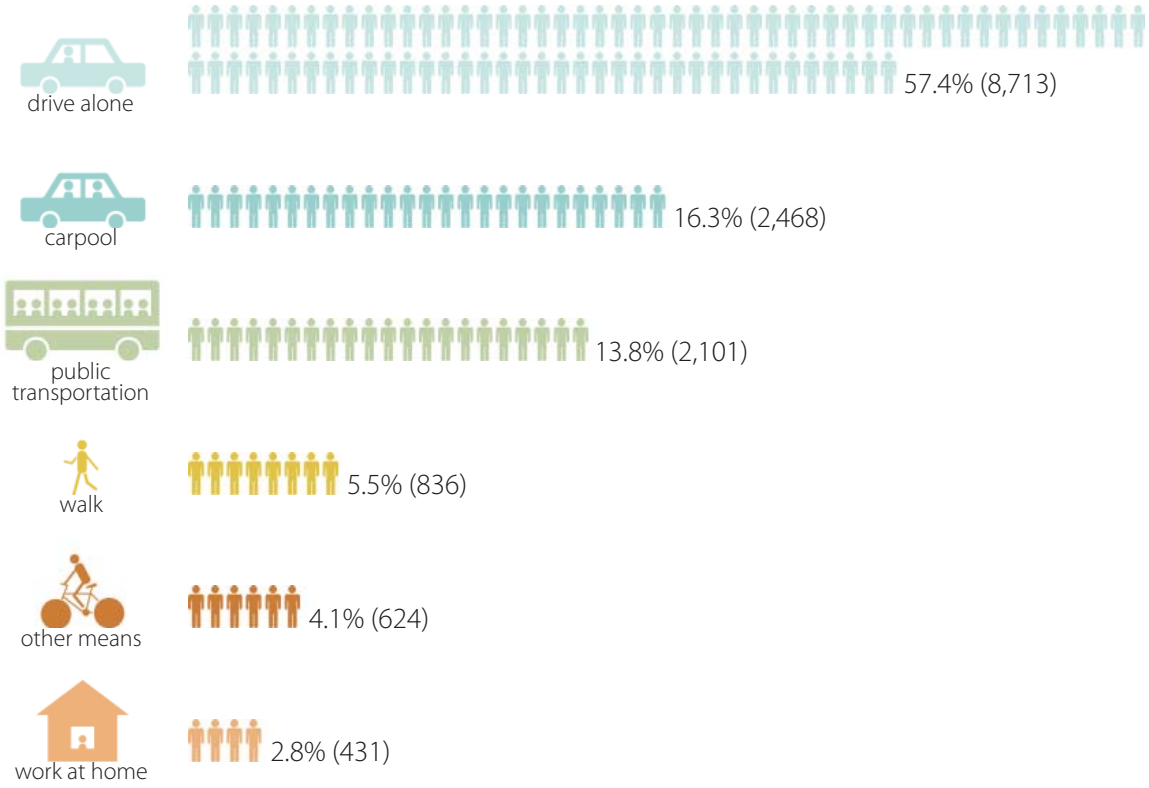


Figure 40: Means of transportation to work distribution in Makiki based on Census 2000 (Source: Author)

2. Site analysis

Benefits of the site

There are a number of factors to attract people to Makiki.

- Close to the proposed station of future transit system at Ala Moana
- Close to University of Hawaii
- Close to a number of other schools
- Close to Downtown

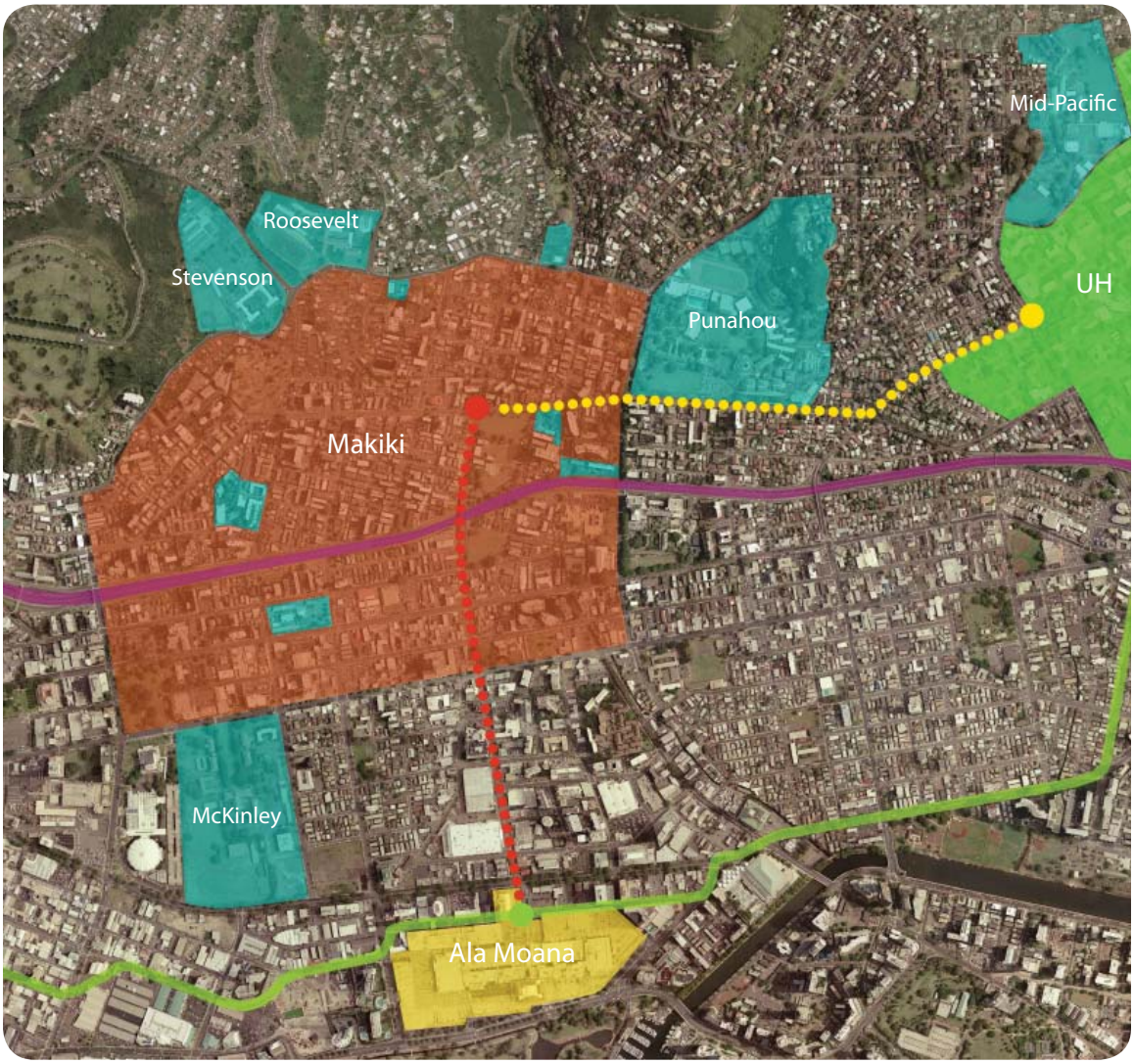


Figure 41: Site map of Makiki (Source: Author)

The station of the future transit system is proposed to be located at Ala Moana shopping center. It will be a great opportunity to draw people into Makiki by introducing secondary transit feeder system such as trolleys on Keeoumoku Street. This could be possible when Makiki becomes a new destination as a new central urban area.

Makiki is surrounded by a number of schools and University of Hawaii is less than a mile away. As there is no place for students to go and hang out after school now, Makiki could be a new place for students to gather, eat, or study. Also, Makiki could be a place to stop by for the parents who drop off and pick up their children at school around Makiki.

Therefore, Makiki will be a magnet not only for the residents in Makiki, but also for people outside of Makiki such as:

- People who use transit system
- People at Ala Moana shopping center
- Students from University of Hawaii
- Students from other schools around Makiki
- Parents of the students who drop off and pick up their children

Given that Makiki should introduce mixed use, people from outside would give a strong impact on Makiki because a good number of people is necessary to make it vibrant and support the business and activities in the mixed use neighborhood.

Sun angle

In order to achieve a successful design, it is important to understand the relationship between the sun and buildings in different seasons for an efficient solar control. An efficient solar control means to eliminate or minimize the effect of the sun on buildings when excessive heat and glare is not necessary during overheated period of the year, and to get maximum solar radiation when heat is necessary during the under-heated period.

Sun angle in Summer

Figure 46: Sun angle in September at 9:00 a.m. (Source: Author)

Figure 47: Sun angle in September at 5:00 p.m. (Source: Author)

Sun angle in Winter

Figure 48: Sun angle in January at 9:00 a.m. (Source: Author)

Figure 49: Sun angle in January at 5:00 p.m. (Source: Author)

3. Building forms and streetscape

The smallest building type in Makiki is the one to two story single family house typically built of wood or concrete blocks. The next in size is the two to four story walk-up apartment building typically built of concrete. The largest building type is the eight story and higher apartment or condominium buildings.

Building forms are often governed by the parcel size and configuration, and zoning. The characteristic of the building forms in Makiki represents development on the original narrow parcel configurations, and height and side yard regulations of zoning. These narrow parcels have caused their structures to be oriented sideways, often yielding a blank wall to the street and giving their inhabitants windows and doors that face away from the sidewalk and street in front their homes. In places where parcel consolidation has occurred, buildings have been built with wider facades.

Figure 50: Existing building facades in Makiki
(Source: Author)

Figure 51: Streetscape in Makiki
(Source: Author)

It is not a pleasant experience to walk along Wilder Avenue given that many apartments are oriented sideways with blank walls and have parking areas in front of the buildings. The relationship between streets and buildings is important and they should interact each other. They should not be divided by the parking lots. In order to achieve a pedestrian friendly streetscape, it is proposed to have more openings facing the street. Mixed use development will promote parcel consolidation and provide more opportunity to have wide building facades with interesting storefronts. Street activity is formed by the interaction of people. When there are more places for people to gather and interact, such as outdoor cafes or market places, the street becomes more vibrant.

There are other important factors to achieve a pedestrian friendly streetscape such as the way sidewalks and landscape are designed. Wilder Avenue has some landscaped areas including street trees, shrubs and narrow strips of grass. However, the landscape is not playing an important role to create a pleasant walking experience. Most shrubs are merely used to separate the sidewalk and the properties. Grass strips are not well maintained and half dead. There are only few flowering trees and shrubs. In spite of the existing landscape, the impression of Wilder Avenue is "gloomy". Moreover, the existing sidewalks are too narrow to enjoy walking and they need to be revised because many areas have cracks due to age or tree roots uplifting the sidewalks.

Another problem that destroys the streetscape is the accumulated rubbish on the sidewalks. It becomes a vicious circle. As the sidewalks are not pleasant, residents do not respect the streetspace and discard bulky trash such as unnecessary furniture. If the sidewalks become attractive, the residents would care about it and keep it clean. The clean and attractive streetscape also provides a safe environment.

Figure 52: The narrow sidewalk in Makiki (Source: Author)

Figure 53: The bulky trash on the sidewalk (Source: Author)

4. Activities on Wilder Avenue

Wilder Avenue has heavy traffic during the hours of school drop-off and pick-up, and also after work hours to avoid the traffic jam on H-1 Freeway. However, there are not so many street activities due to lack of public space and commercial facilities such as parks, grocery stores, recreation facilities or cafés. Pedestrians are hardly seen because the walking experience is not so pleasant and there are few walkable destinations except for Makiki Shopping Village and Makiki District Park.

Makiki Shopping Village

Makiki Shopping Village is the only place to eat or shop on Mauka side of the H-1 Freeway in all of Makiki. The uses of this Shopping Village include:

- Small super market
- Coffee shop
- Fastfood restaurants
- Barber shop
- Laundry
- Video shop
- Wine store

The fastfood restaurants are well occupied only after school hours when high school students come and get snacks before they go home. Pizza Hut here is one of the busiest chains in the state to serve the high density of entire Makiki. Otherwise, other restaurants are relatively empty during dinner time. The coffee shop is never well occupied. As the supermarket is small and does not have wide range of goods, people drive to other supermarkets. The laundry is always full of people, but there is no place to sit and wait. The wine store has good selections, but it is underground and hard to find. Makiki definitely needs more retail stores that attract people. As a resident of Makiki, it is unfortunate to have to drive to somewhere else for coffee with friends instead of walking to a favorite place in your own neighborhood.

Figure 54: Makiki Shopping Village (Source: Author)

Makiki District Park

Makiki District Park is well occupied on weekends for different activities and it is the only public open space that serves the Mauka side of H-1 Freeway of entire Makiki. The park uses include:

- Large lawn area
- Community garden
- Swimming pool
- Tennis courts
- Basketball courts
- Skate board park
- Arts & Craft building
- Library (currently closed)

The large lawn area is used for many different activities such as soccer, football, and volleyball especially on weekends. It is also used for mothers to play with their little children. Tennis courts and basketball courts are well occupied at night around 5:00 p.m. to 8:00 p.m. with people who want to have exercise after school or work. This park functions relatively well, but there are still some aspects that are not functioning very well. The community garden is divided into individual parcels and each parcel has ugly fences all around. The users are afraid of getting their plants messed up or stolen. The interior of the Arts & Craft building does not provide a pleasant environment because it is an old building. The library has been closed since they are planning to renovate, but the renovation has not started yet. There are other buildings that are also not used for a while. Neglected empty buildings give an "unsafe" impression. Moreover, the park is isolated. It would be more convenient if this park was connected to Makiki Shopping Village to get something to eat after exercise or buy groceries on the way home. If they are connected, Makiki Shopping Village would be more vibrant. The unused buildings could be utilized for other uses such as a gym, coffee shop or snack stands.

Figure 55: Makiki District Park (Source: Author)

Chapter 3: What is Mixed use?

1. Definition of mixed use development

As stated in Chapter 1, mixed use could be introduced as a primary strategy that provides an infrastructure to form an identity in a neighborhood. Mixed use development refers to the practice of allowing more than one type of use in a building or set of buildings. In planning terms, this can mean some combination of residential, commercial, industrial, office, institutional, or other land uses.

2. History of mixed use

Throughout most of human history, the majority of human settlements developed as mixed-use environments. Walking was the primary way that people and goods were moved about, sometimes assisted by animals such as horses or cattle. Most people lived in buildings that were places of work as well as domestic life, and made things or sold things from their own homes. Most buildings were not divided into discrete functions on a room by room basis, and most neighborhoods contained a diversity of uses, even if some districts developed a predominance of certain trades, such as metalworkers, or textiles or footwear due to the socio-economic benefits of propinquity. People lived at very high densities because the amount of space required for daily living and movement between different activities was determined by walkability and the scale of the human body. This was particularly true in cities, and the ground floor of buildings was often devoted to some sort of commercial or productive use, with living space upstairs.

This historical mixed-used pattern of development declined during industrialization in favor of large-scale early capitalist-style manufacturing in single-function buildings. This period saw massive migrations of people from rural areas to cities drawn by work in factories and the associated businesses and bureaucracies that grew up around them.

The influx of new workers needed to be accommodated and many new urban districts arose at this time with domestic housing being their primary function. Thus began a separating out of land uses that previously had occurred in the same spaces. Furthermore, many factories produced substantial pollution of various kinds. Distance was required to minimize adverse impacts from noise, dirt, noxious fumes and dangerous substances. Even so, at this time, most industrialized cities were of a size that allowed people to walk between the different areas of the city.

These factors were important in the push for Euclidian zoning premised on the compartmentalization of land uses into like functions and their spatial separation. In Europe, advocates of the Garden City Movement were attempting to think through these issues and propose improved ways to plan cities based on zoning areas of land so that conflicts between land uses would be minimized. Modern architects such as Le Corbusier advocated radical rethinking of the way cities were designed based on similar ideas, proposing plans for Paris such as the Plan Voisin, Ville Contemporaine and Ville Radieuse that involved demolishing the entire centre of the city and replacing it with towers in a park-like setting, with industry carefully sited away from other uses.

Figure 56: The Plan Voisin, Ville Contemporaine and Ville Radieuse (Source: Web - "Different visions of the future")

In the United States, another impetus for Euclidian zoning was the birth of the skyscraper. Fear of buildings blocking out the sun led many to call for zoning regulations, particularly in New York City. Zoning regulations, first put into place in 1916, not only called for limits on building heights, but eventually called for separations of uses. This was largely meant to keep people away from living next to polluted industrial areas. This separation however, was extended to commercial uses as well, setting the stage for the suburban style of life that is common in America today. This type of zoning was widely adopted by municipal zoning codes. [1]

With the advent of mass transit systems, but especially the private automobile and cheap oil, the ability to create dispersed, low-density cities where people could live very long distances from their workplaces, shopping centers and entertainment districts began in earnest. However, it has been the post-second World War dominance of the automobile and the decline in all other modes of urban transportation that has seen the extremes of these trends come to pass.

1. Dean Schwanke: *Mixed-use Development Handbook, Urban Land Institute, Washington, D. C., 2003*

3. Different types of mixed use

There are different types of mixed use development. Different developments require different planning approaches and provide an interesting contrast of the implementation of mixed use development. It is important to investigate what kind of mixed use development is suitable for Makiki.

Vertical mixed use

Vertical mixed use provides an example of the potential for higher densities. Characterized by stacking uses, vertical mixed-use projects are usually multistory buildings in central city locations. As a focused growth tool, this is often an effective method to develop vacant land (e.g., surface parking lots) into bustling, multi-use centers. Most mixed use towers are built adjacent to buildings of similar scale and height. Therefore, they blend well with neighboring buildings. [1]

Figure 57: Vertical mixed use (Source: Author)

Figure 58: John Hancock Center
(Source: Web - Google images)

The first mixed use tower in the United States was John Hancock Center in Chicago. It cost $100 million to develop in 1965. The 100-story structure contains 2.8 million square feet on a 104,000 square foot parcel of land and half of the parcel is devoted to open space. The top floors are condominiums, offices are located on the middle floors, and commercial operations are on the first five floors. The John Hancock building revitalized a bleak area while emphasizing a strong integration with the surrounding urban fabric.

1. Eddie S. Wang: *Building Types Basics for Retail and Mixed-Use Facilities, Wiley, John & Sons, Incorporated, Hoboken, N. J., 2003*

Later examples of vertical mixed-use became more inward oriented, focusing on grand atriums and enclosed public spaces. This led to the criticism that vertical towers were becoming fortresses on the urban landscape with no connection to surrounding areas. As vertical, mixed-use matured and changed, a return to a more integrated approach became the preferred design. [1]

Figure 59: Example of enclosed public space
(Source: Web - Google images)

Figure 60: Vertical mixed use in Kaka'ako
(Source: Author)

Vertical mixed use is often seen in downtown areas. Downtowns are often characterized by an excess of office uses that create empty public places after work hours. Downtown mixed use can positively inject activity with entertainment, hotel, and residential uses. Large scale vertical mixed use projects have a great impact on public spaces by providing public plazas and amenities. Planning targeted to attract vertical mixed-use must consider density, land use, and design demands. Density and vertical capacity are greatly affected by zoning codes that restrict building heights and limit floor area ratios. The challenge is to find tools that encourage the integration of mixed use with surrounding development and to avoid the negative image of fortresses.

Vertical mixed use is also seen in Kaka'ako, Honolulu. This area has been developed in recent years building high-rise condominiums with commercial use on the ground level. This type of mixed use is suitable for a vacant land for new development or a high-density neighborhood that already has a number of high-rise buildings. It is not suitable for Makiki as high-rise buildings may destroy the human scale of the friendly neighborhood.

1. Eddie S. Wang: *Building Types Basics for Retail and Mixed-Use Facilities, Wiley, John & Sons, Incorporated, Hoboken, N. J., 2003*

Town center planned mixed use

Town centers are an urban and regional planning concept used to focus and manage growth in urban areas. The use of designated "centers" by regional planning entities allows these agencies to manage transportation and land use on a regional level. Regional governments often encourage jurisdictions within the region to manage growth by setting goals for higher densities within designated "centers." This can help manage transportation demand, control growth, and encourage the efficient use of urban services.

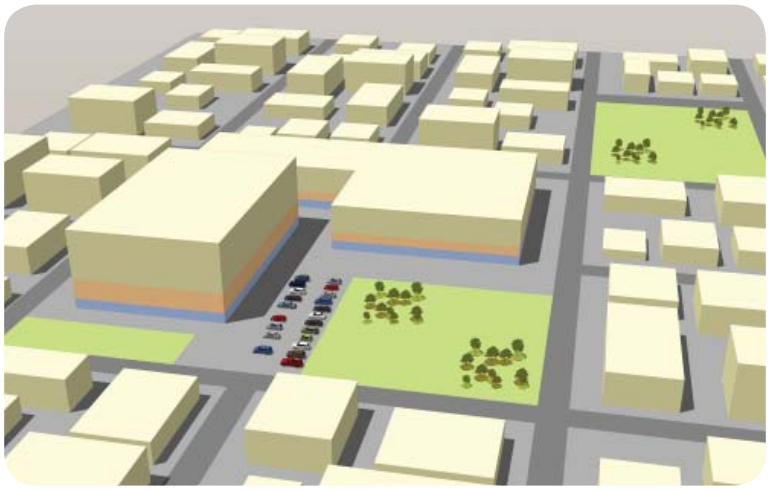


Figure 61: Town center planned mixed use (Source: Author)

Cities with concerns about growth can utilize supportive regional policies that designate focused growth areas. As with regional governments, cities set goals for concentrating growth and developing plans to meet growth management goals. Cities and regional governments choose designated areas differently. Some are chosen through representative jurisdiction and others through citizen initiative working with regional planning staff. Depending on the state land use laws, regional governments have the power to disperse funds to municipalities with designated centers for focused growth or transportation-related planning.

Redmond, Washington and the Hillsdale district in Portland provide good examples of mixed use development in a town center designation. Redmond is a suburban location that developed vacant land into a new, mixed use town center. In contrast, the Portland Planning Bureau adjusted zoning in the Hillsdale core area to encourage pedestrian friendly amenities and enhance existing development. City planners used two different planning approaches for these centers. In Redmond, planners reviewed a master plan submitted by a developer, while in Hillsdale, citizens asked the planning bureau to consider zoning changes. [1]

1. Leland Consulting Group: *Mixed-use Case Studies, Portland, OR, 1999*

Figure 62: Redmond Town Center
(Source: Web - Google image)

Figure 63: Hillsdale mixed use planning
(Source: Web - Google image)

Town center planned mixed use could be suitable for Makiki because Makiki needs to be a new urban center and that requires zoning changes. The mixed use center will provide a new urban focus for Makiki by introducing a secondary mass transit feeder system from Ala Moana and providing shop-lined streets, landscaped plazas or parks. A mix of uses encourages a vibrant core of activity. It also maintains many acres of open space, integrates community plazas with open space, and integrates the existing residential areas with development to increase overall livability.

Adaptive mixed use

The adaptive reuse of older buildings is becoming more attractive as an emerging opportunity for creative mixed use redevelopment. Adaptive reuse typically involves converting older buildings to a new mix of uses. Adaptive reuse of existing buildings is attractive for planners concerned with revitalizing the city and historic districts through private investment. Adaptive mixed-use provides an opportunity for redevelopment of cities that have seen years of neglect and divestment.

Figure 64: Adaptive mixed use (Source: Author)

The unique historic quality of old city areas offers planners and developers a shared opportunity to attract residents to inhabit mixed use developments. Cities that want to encourage mixed use redevelopment can capitalize on market changes to reclaim blighted areas. Older business districts provide opportunities for adaptive mixed use because they typically contain underutilized or vacant historic buildings that could support a mix of residential and commercial uses. Adaptive reuse of buildings has become economically feasible because real estate market changes have made mixed-use more affordable.

Adaptive reuse projects are more planning intensive because of zoning and building code issues. Adaptive reuse requires upgrading older buildings and, therefore, presents both code and historic preservation issues. One of the important roles of planners is to require safe approaches to retrofitting buildings. Redevelopment challenges are overcome by finding new methods to meet seismic and fire codes that preserve buildings and ensure public safety. However, these barriers often require public-private partnerships or public incentives to attract developers. Adaptation of older buildings that involves retrofitting increases the cost of mixed use, especially when buildings are designated as historic landmarks.

The Landreth in Philadelphia, Pennsylvania is one of the good examples of adaptive mixed use. An abandoned historic Gothic-style school, the David Landreth School was sound but demanded new mechanical, electrical, plumbing, and HVAC systems to become livable. Its wide halls and spacious classrooms were creatively adapted to provide 51 affordable apartments for seniors. A social hall with a full service kitchen is on-site for weddings, banquets, and other community events. The Landreth also accommodates the Queen Memorial Branch of the Free Library of Philadelphia.

Figure 65: The Landreth
(Source: Web - Google image)

Adaptive mixed use development is suitable for Downtown and Chinatown in Honolulu because there are a number of historical buildings there. However, this type of mixed use could be introduced in some areas in Makiki. There are some historical buildings in Makiki that are hardly used, such as the buildings (originally, Hawaii Sugar Planters Association laboratory buildings) in Makiki District Park.

Figure 66: Unused building in Makiki
(Source: Author)

Corridor high-density residential mixed use

Historically, neighborhood mixed use projects were often located in commercial nodes, often clustered along arterial or neighborhood corridors. When these areas were developed, streetcar lines ran along many major city corridors. Mixed use offered convenient retail for streetcar commuters. Some of these corridors continue to have high traffic volumes, providing good sites for redevelopment. As was the case in the streetcar era, nodal mixed use development offers convenient shopping, housing, and office space for nearby neighborhoods. Focusing growth has prompted many cities to take a second look at corridors that have been long neglected. Opportunities along corridors include transit-oriented and mixed use infill development. [1]

Figure 67: Corridor high-density residential mixed use (Source: Author)

Regional planning has recognized the use of corridors as opportunities for focused growth. The following quotation from Metro, the regional planning organization, in Portland, Oregon offers suggestions for vertical or horizontal mixed use development along corridors:

Corridors are not as dense as centers, but also are located along good quality transit lines. They provide a place for densities that are somewhat higher than today and feature a high-quality pedestrian environment and convenient access to transit… While some corridors may be continuous, narrow bands of higher intensity development along arterial roads, others may be more nodal, that is, a series of smaller centers at major intersections or other locations along the arterial that have high quality pedestrian environments, good connections to adjacent neighborhoods and good transit service. As long as the average target densities are allowed and encouraged along the corridor, many different development patterns - nodal or linear may meet the corridor objective. [2]

1. Leland Consulting Group: *Mixed-use Case Studies, Portland, OR, 1999*
2. Metro Regional Framework Plan

Metro's regional plan emphasizes the need for corridors to absorb urban growth through flexible, mixed use development either along linear developed areas or in nodes. Many cities plan for redevelopment through special district plans, town center plans, or neighborhood plans. A variety of planning tools are used to encourage development along existing corridors and include zoning incentives, design standards, amenities, and incentives for redevelopment. The challenge of encouraging mixed use along existing corridors involves attracting developers to infill lots that are often more difficult to develop. Cities, at a minimum, should work to update public amenities such as sidewalks and street trees and should adjust zoning to accommodate higher-density, mixed use and housing. The design challenges in building mixed use along a busy traffic corridor include buffering housing from the street frontage and working with existing auto-oriented uses. [1]

Boundary Street in Beaufort South Carolina is a good example of corridor mixed use development planned by the town planner Dover, Kohl & Partners. Although Beaufort is not in a residential area, this development shows how the major corridor could be transformed into a pedestrian friendly mixed use street. Boundary Street corridor, currently includes 4 lane roadway through a rundown industrial area. They continued recent planning and development initiatives to transform this corridor into a dense, mixed use urban village.

The design for Boundary Street that came out of this cooperative effort is a corridor of dense, walkable, mixed-use urban in-fill development. Parallel parking with protective bulb-outs on each block; the installation of 10' wide sidewalks; raised platform street crossings to provide enhanced handicapped accessibility and additional protection for pedestrian traffic; and the inclusion of outdoor eating areas adjacent to pedestrian walkways serves to calm traffic and enhance connectivity. Landscaping and on-street parking serve to provide separation and protection between the pedestrian traffic and street traffic. The outside lanes of the street will be designated for bicycle, bus (future street car) and automobile traffic. The center median will be landscaped to achieve the pleasant effect.

Figure 68: Existing Boundary Street
(Source: Dover Kohl & Partners)

Figure 69: Proposed mixed use on Boundary Street
(Source: Dover Kohl & Partners)

1. Eddie S. Wang: *Building Types Basics for Retail and Mixed-Use Facilities, Wiley, John & Sons, Incorporated, Hoboken, N. J., 2003*

Corridor high density residential mixed use is suitable for Makiki as Wilder Avenue is a corridor that used to have streetcars and currently still has a high traffic volume, providing a good sites for redevelopment. As Metro's regional plan suggested the need for corridors to absorb urban growth through flexible, mixed use development either along linear developed areas or in nodes, Makiki is a perfect site for this type of development with the node at the intersection of Keeaoumoku Street and Wilder Avenue. Furthermore, Makiki can develop linearly from the node along Wilder Avenue in different phases.

Neighborhood mixed use

Neighborhood planning is gaining popularity around the country as planners turn to main street models to plan for transit and high-density development. While neighborhood density and physical design vary depending upon unique geography, demographics, and history, most neighborhoods contain basic elements such as a mix of dwelling units, shops, workplaces, civic buildings, worship places, and schools. Neighborhoods are contained within a relatively small geographic area and have a tight network of interconnecting streets and public spaces.

Cities take different approaches to neighborhood planning for focused growth. Within larger urban areas, neighborhoods may be shaped by local neighborhood plans, community plans that encompass several neighborhoods, or special projects such as economic development corridors. Zoning can be used to encourage commercial redevelopment around historic districts depending upon planning goals and desired growth patterns. Neighborhood mixed use development has the advantage of financial or technical support from city agencies. For example, some mixed use developments may gain storefront revitalization or neighborhood improvement grants through community development programs.

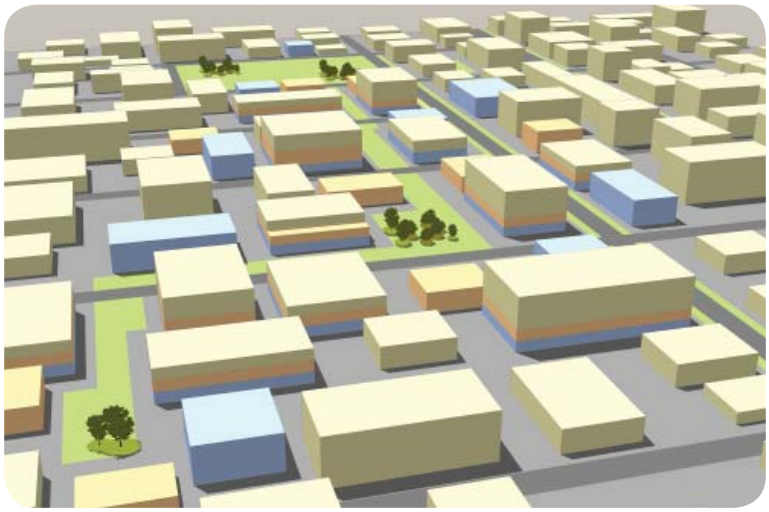


Figure 70: Neighborhood mixed use (Source: Author)

The location and individual character of a neighborhood mixed use center is often determined by historic growth patterns, topography and transportation access. The mix of uses found in buildings is determined by local demographics, local market conditions, and allowed usage. Like all development, neighborhood mixed use must be responsive to market trends to capture local business. The advantage of mixed use development in dense, established urban neighborhoods comes from the number of households per acre and local buying power. The variety of needs in traditional neighborhoods provides a ready market for many uses and increases the potential success of mixed use. Urban neighborhoods may also have the advantage of traffic corridors and transit that bring customers from outside the immediate neighborhood. New mixed use development may have difficulty gaining approval because neighbors often voice objections to increased traffic from new retail or commercial uses. A primary step in neighborhood mixed use redevelopment is to gain the support of the neighborhood.

Neighborhood mixed use is suitable for Makiki as Makiki has basic elements such as a mix of dwelling units, parks, churches and schools. However, Makiki does not have enough retail stores. Mixed use development will facilitate Makiki to have more retail stores and working opportunities within a walking distance. Furthermore, the secondary feeder system from Ala Moana Would bring people from outside Makiki.

Vertical

Not so suitable for Makiki:
High-rise buildings may destroy the human scale of the friendly neighborhood.

Town Center

Relatively suitable for Makiki:
Makiki could to be a new central urban area.

Adaptive

Suitable for Makiki in some areas:
There are some historical buildings that could be reused for other purposes.

Corridor

Very suitable for Makiki:
Wilder Avenue could act as a corridor providing good sites for redevelopment.

Neighborhood

Very suitable for Makiki:
Makiki has basic elements for a good neighborhood except for commercial facilities.

4. Advantages of mixed use

Throughout the late 20th century, it became obvious to many urban planners and other professionals that mixed-use development had many benefits and should be promoted again. As American, British, Canadian and Australian cities deindustrialized, the need to separate residences from dangerous factories became less important. Completely separate zoning created isolated "islands" of each type of development. In most cases, the automobile had become a requirement for transportation between vast fields of residentially zoned housing and the separate commercial and office strips, creating issues of Automobile dependency. In 1961, Jane Jacobs' influential *The Death and Life of Great American Cities* argued that a mixture of uses is vital and necessary for a healthy urban area.

Zoning laws have been revised accordingly and increasingly attempt to address these problems by using mixed-use zoning. A mixed use district will most commonly be the "downtown" of a local community, ideally associated with public transit nodes in accordance with principles of Transit-Oriented Development (TOD) and new urbanism. Mixed use guidelines often result in residential buildings with street front commercial space. Retailers have the assurance that they will always have customers living right above and around them, while residents have the benefit of being able to walk a short distance to get groceries and household items, or see a movie.

Diversity

The mixture of land uses encourages the diversity of environmental stimulation for residents. For example, people who visit Makiki District Park would go to other destinations afterwards if there were more places to eat or shop around the park. Mixed use promotes the sociability of the neighborhood by providing a diversity of meeting places. It is important to enhance diversity at the scale of the pedestrian.

Opportunity

Mixed use widens the choice of activity that is accessible to the residents by expanding the range of environments that they can experience as a pedestrian. Mixed use also provides more working opportunities for the residents within a walking distance as well as socializing opportunities.

Reduction of dependency upon the automobile

Mixed use enables the pedestrian to easily access goods and services. Current land use patterns emphasize the separation of land uses and make it necessary to use the automobile for transportation. Mixed use provides the option to walk by bringing destinations closer together. As mixed use increases residential and employment densities, it also encourages the development of mass transit. When the need for the automobile is reduced, problems such as gasoline consumption, air pollution, noise, traffic and parking are minimized.

Increase in land use efficiency

It is efficient to duplicate uses by extending the operational hours of a building. Mixed use allows land or buildings to be used more intensively and for longer periods of time. For example, public space in a building could be used for 24 hours if the building contained two uses with compatible schedules such as restaurants and bars.

Figure 71: Example of Restaurant / Bar
(Source: Web - Google image)

Figure 72: Example of Restaurant / Bar
(Source: Web - Google image)

5. Disadvantages of mixed use

Mixed use development is seen as too risky by many developers and lending institutions because economic success requires that the many different uses all remain in business. Most development throughout the mid to late 20th century was single-use, so many development and finance professionals see this as the safer and more acceptable means to provide construction and earn a profit. Christopher B. Leinberger notes that there are 19 standard real estate product types that can obtain easy financing through real estate investment trusts. Each type, such as the office park and the strip mall, is designed for low density, single use zoning. Another issue is that short term discounted cash flow has become the standard way to measure the success of income-producing development, resulting in "disposable" suburban designs that make money in the short run but are not as successful in the mid to long term as walkable, mixed use environments.

Mixed use commercial space is often seen as being best suited for retail and small office uses. This precludes its widespread adoption as the trend to ever-larger corporate and government employment accelerates.

Mixed use residential buildings and neighborhoods are best suited to those who prefer public amenities to private, regulated personal space. The lack of private outdoor space for kids and pets is undesirable to some, particularly in some North American cultures because or their cultural background of pioneer days and they are use to single family housing types with a back yard on a large parcel of land. However, Makiki has a variety of cultural background including almost 50% Asian people. Asian people are used to living on a limited land parcels and taking advantage of public spaces.

Construction costs for mixed-use development currently exceed those for similar sized, single-use buildings. Challenges include fire separations, sound attenuation, ventilation, and egress. Leinberger explains, "*Good urban architecture costs upward of 50 percent more than typical suburban buildings. In urban areas, residents and businesses demand a higher quality of building, since you are walking past them, not driving by at 45 miles an hour with the buildings set back 150 feet.*"

Additional costs arise from meeting the design needs. In some designs, the large, high-ceilinged, columnless lower floor for commercial uses may not be entirely compatible with the smaller scale of walled residential space above. Often the parking space requirements for businesses exceed those of residential development. Thus, mixed use projects that are not sited close to public transit are likely to require a large number of parking spaces that may be difficult to finance. It should be noted however that in mixed-use developments in some denser areas, owning an automobile might be considered a luxury rather than a necessity. A notable example in the United States would Manhattan, though this is not a typical case.

Others maintain that modern consumers prefer big box retailers, as evidenced by the fact that most grocery shoppers today would prefer the convenience of weekly shopping, as opposed to picking up each day's food items from a number of local shops. However, quality is sometimes more important than quantity as a lot of residents in Hawaii go to farmer's market in the early morning to get fresh vegetables.

Chapter 4: Case studies of Mixed use and Great Public Places

1. Mixed use: Hillside Terrace - Tokyo, Japan

Background

The central areas in most of the cities in Japan including Tokyo consist of homogenized office and commercial buildings lacking in identity. Industrialized oceanfront has been taken over by entertainment facilities such as theme parks in past twenty years, and road and railroad systems have grown without any order. The architectural trend has shifted from public to commercial building after the economic bubble in 1984 when a number of commercial buildings started win architectural awards. Since then, the buildings designed by famous architects were randomly slotted into the cities. In this way, a lot of the space in the cities is filled with chaotic buildings.

Although Japan had enough time and money to preserve their cultural city heritage, "instant cities" consisted of modern shopping centers or office buildings came along as a result of prioritizing the way to make the cities grow efficiently. Unfortunately, traditional urban form with Japanese old community-based wooden houses or temples has been almost destroyed and they are losing their identity. It is necessary to accept the fact caused by the rapid and large scale development, and to consider a new way of creating the city space.

Figure 67: Tokyo (Source: Web - Google image)

Figure 68: Tokyo (Source: Web - Google image)

History

Daikanyama was once a quiet residential neighborhood in Tokyo, Japan. The main street called Old Yamate Street was 22-feet wide and there was hardly any traffic. Daikanyama developed as a neighborhood for foreigners and became a modern high-end residential neighborhood after the new railroad system started and Dojunkai Apartment [1] was completed in 1920s.

Hillside Terrace is a series of mixed use buildings along Old Yamate Street designed by a Japanese architect, Fumihiko Maki. The A wing and the B wing of Hillside Terrace were built in 1969. It played a great role in forming Daikanyama by introducing commercial stores in this residential neighborhood. Hillside Terrace received a great reputation as a rare example of an architecture that formed the neighborhood. Hillside Terrace became a symbol of this neighborhood. It took 25 years to complete this Hillside Terrace project. However, it was not completed when the construction was done. It adopted a very flexible way of evolution; it grows as an environment and keeps updating as needed with the passage of time. [2] The main concepts of this project are:

- Suggestive connection of scale between inner space outer space
- Interaction between building facades and streetscape

Public pedestrian space is where activities occur and it also functions as a transitional space to those commercial stores around it. Hillside Terrace focused on this spacial relationship and the importance of building facades that affect streetscape.

This case study focuses on how Hillside Terrace affected the Old Yamate Street and the importance of the architecture that changes the neighborhood.

Figure 73: Dojunkai Apartment (Source: Web - Flickr)

Figure 74: Hillside Terrace (Source: Web - Google image)

1. Dojunkai is one of the first reinforced concrete apartment buildings after The Great Kanto Earthquake in1923.
2. Fumihiko Maki: *Hillside Terrace + Western World*, *Kajima Institute Publishing Co., Tokyo, Japan 2006*

It seems that the streetscape of Old Yamate Street is influenced by the change in building heights, materials, and colors generated by the existence of Hillside Terrace. In order to understand the impact of Hillside Terrace on facades of other buildings on Old Yamate Street, it is necessary to set the building heights, materials, colors and arrangement and investigate how those factors influence the facades of other buildings. The first step is to examine whether Hillside Terrace itself has a certain level of uniformity or not by investigating the facade of Hillside Terrace. The next step is to examine the influence on this neighborhood by investigating the facades of other buildings on Old Yamate Street.

Facades of Hillside Terrace

Basically, there is no commonality of the materials except for the facades of the wings built in the same period of time. In order to enhance the atmosphere of the period of time, it seems that they always tried to use the new and trendy materials such as tiles, bricks, stones, and glass blocks. Although the facades have only a little use of glass, they do not provide the feeling of pressure because the buildings have a lot of setback spaces. The area where glass is used is limited to the commercial space on the first floor faced on Old Yamate Street and windows for the residential space on the upper floor are relatively small and just enough to collect the natural light.

Unlike the materials, colors are relatively uniform, although there are different types of paint due to the different materials. One of the reasons for using beige or earthy colors in general is to achieve the harmony with surrounding buildings and not to be overstated. Another reason is that it is simply easy to repaint and relatively easy to keep the same color.

Figure 75: Facades of Hillside Terrace (Source: Web - Flickr)

The characteristics of the facades are different from each other according to the period of time. The method used for Hillside Terrace is not to form the neighborhood by using uniform facades, but by intentionally creating the changing atmosphere of the period of time. This method was invented when the D wing was built and it is based on the concept of considering the area not as a single architecture, but as a group of architecture. However, a certain level of uniformity is enhanced by the three to five floor height, color uniformity, open spaces, and the continuous use of the columns on the street side. Hillside Terrace provides an atmosphere of the passage of 25 years, and at the same time, it creates a certain level of uniformity of the A wing through the G wing along Old Yamate Street.

Facades of surrounding buildings on Old Yamate Street

Daikanyama was a quiet residential neighborhood with old wooden houses surrounded by stone walls before this Hillside Terrace project. There were spaces between low-rise houses and the neighborhood was not very dense. The facades of the buildings on Old Yamate Street started to change in the past ten years. Before then, the gas station caused a bad impact on the streetscape on Old Yamate Street. However, the street became beautiful with the new facades after the F wing and the G wing of Hillside Terrace were completed, the gas station was removed, and more commercial stores were built.

The surrounding buildings have no commonality in their use of materials. They also used in vogue materials in each period of time such as tiles, bricks, stones, and glass. White or earthy colors were the main color scheme for the facades in the area around Hillside Terrace so that the facades do not fight each other and provide a certain level of uniformity. Most buildings on Old Yamate Street have setback space similar to Hillside Terrace. The building heights could be higher as the land use has changed over time, but most buildings adjacent to Hillside Terrace keep their height similar to Hillside Terrace because they respect it and keep the harmony with Hillside Terrace.

Figure 76: Old Yamate Street and building facades (Source: Web - Google image)

Transformation of the neighborhood

The retail stores in Hillside Terrace are selected by Fumihiko Maki. The turnover of the retail stores in Hillside Terrace is relatively small and most of them are still there after 20 years. The quality of the commercial use in Hillside Terrace is maintained by keeping the high quality retail stores strictly selected by the architect. This quality stimulates other retails stores around it to improve their quality as well.

Daikanyama was a quiet residential neighborhood with old wooden houses surrounded by stone walls before this Hillside Terrace project. There were mostly single family houses along Old Yamate Street in 1960s. As this project went on, single family houses were gradually converted into commercial or mixed used buildings along the street in 1970s. Nowadays, there are only few single family houses remaining on Old Yamate Street. The land use has been changed into mixed use and small parcels for single family houses were consolidated to accommodate lager scale mixed use development.

Spatial composition in Hillside Terrace

A network and different width of paths, platforms, and stairs create a spacious leisurely ambiance that leads pedestrians into the inner public space, with its courtyards, shops, and restaurants. At the same time, the privacy and individuality of the residential space on the upper floor are ensured in order to achieve the residential character associated with this neighborhood.

Figure 77: Different spatial experience in Hillside Terrace (Source: Web - Flickr)

Conclusion

Daikanyama neighborhood as well as Old Yamate Street was greatly influenced by Hillside Terrace. The new neighborhood was formed by the characteristic of flexible architecture changing over time and the natural awareness of the impact of the facades on the street. After Hillside Terrace was completed, the land use on Old Yamate Street has been transformed into mixed use and more and more people started to come out on the street and the neighborhood became more vibrant. Originally, it was difficult to convert this old residential neighborhood into commercial mixed use neighborhood, but Hillside Terrace triggered the great transformation. Hillside Terrace has been absorbed into the neighborhood slowly with the passage of time and gradually changing the neighborhood itself.

2. Mixed use: Silodam - Amsterdam, The Netherlands

Background

Silodam, designed by Dutch architects MVRDV in 1995, is situated on the IJ River, at the tip of the pier, next to two former grain warehouses that have been converted. The IJ River served as Amsterdam's harbor in the golden age. Then, when the harbor fell into a decline, the buildings, warehouses, and shipyards were left unused. In the 1980s, when Amsterdam had a housing shortage, the city regained interest in the river's potentials and a variety of restructuring projects, where the designers tried to fuse the remaining structure and character of the harbor with new architecture.

The building, completed in 2002, rises right in the middle of the river, supported on very strong pilotis. It looks like an enormous ship from far away, though a closer look reveals its metropolitan character. The project was conceived in response to a specific development plan for construction of an architectural complex incorporating apartments, commercial premises and public spaces.

Figure 78: IJ River (Source: Web - Google image)

Figure 79: Silodam in full view (Source: Web - Google image)

The 157 apartments, business units and public spaces, in Silodam, are compressed within a 10 story high and 20 meters deep urban envelope. The apartments, rental and owner in different sizes, are stacked in internally connected neighborhoods. The building is designed to provide a wide variety of units to respond to different needs and wishes of different individuals. The complex consists of different types of units that vary in width, depth, number of stories, window types, presence and type of outdoor space, balcony, layout and access method. [1]

Meeting different needs

In order to meet the needs of individual clients, apartments were grouped into "mini neighborhoods" with safe, comfortable spaces. Each group includes four to eight units and has its own access responding to specific needs. All apartments have an entrance hall, a corridor, a balcony, a garden and a patio. Each neighborhood represents a specific type of dwelling, structure and facade. They are independent of one another, creating a complex system of passageways criss-crossing the entire building. As the network of pathways combines with work areas and gardens, the result is a vertically arranged neighbourhood in which individual apartments take on the characteristics of houses with their own gardens.

Diversity

Each unit differs, both in orientation and size. They can be half a block, a whole block, or diagonal over two floors, some with terraces or balconies others with patios. The apartments are not only different in size and color, but also by the placement of the interior walls that can be moved and replaced by future inhabitants.

These groups of four to eight units, of the same type, are recognizable by the different treatment of the elevations and the colors used in the corridors. Because of the various materials and colors, the neighborhoods are also recognizable from the exterior of the building.

Figure 80: Silodam (Source: Web - Google image)

1. arcspace.com, 2005

Spatial experience

The commercial and public areas are not located exclusively on the lower floors, but distributed at all levels of the building. On the west side of the building, the base of the structure is penetrated with a wide passageway that leads to a pubicly accessible balcony, with magnificent views of the IJ, that can be used by all residents. The business spaces underneath the balcony share the same views. Residents can walk through the building passing different facades and roof tops, under the building through the hall to the terrace, or along the marina where boats can be docked.

Figure 81: The wide passageway
(Source: Web - Google image)

Figure 82: The marina
(Source: Web - Google image)

Conclusion

Silodam is an example of truly innovative architecture expressing a new concept of spatial development which few architects have attempted so far, in which premises are arranged not only horizontally but on a vertical basis too, with floors that fold and intersect with one another with the utmost flexibility. Solidam is a great outcome of urban development themes relating to high population density, giving rise to designs that make optimal use of all available space.

3. Great street: Cat Street - Tokyo, Japan

Background

Cat Street is a half-mile pedestrian street that connects Harajuku to Shibuya. It was originally a narrow sidewalk along Shibuya River. The river was buried and converted into a underground drain in 1964. The street was used as a parking lot as the use over the drain was not restricted at that time. In 1967 the city banned parking on this street as part of the redevelopment of this area and offered this street as a pedestrian street. Today, no cars are allowed on this street except for emergency cars, service cars, or cars of residents.

There are different stories behind the name "Cat Street". Some say it is so called because there are so many cats on this street, others say because it is the birthplace of the Japanese band "Black Cat". It is one of Tokyo's most vibrant and artistic areas. Flanked by design shops, cafes, street vendors, and artists' studios, the street attracts young generation. At the same time, there are some old single family housings and old residents of those houses also walk along this street.

Meandering street

The meandering flow of Cat Street enables the pedestrians to have new experience and prevent them from getting bored. The pedestrians enjoy the walking experience and new findings as they move on. The curvy street also has an effect that the stores come into pedestrians' site spontaneously.

Figure 83: Map of Cat Street
(Source: Web - Google image)

Variety of options

Cat Street has an intimate scale that brings pedestrians into close contact with the attractive storefronts. The walking experience on this street is exciting because there are so many different options next to each other. Pedestrians can find almost anything in different retail stores such as clothes, shoes, hats, glasses, bags, furniture, books or plants. When pedestrians get tired from shopping, there are many cafes and restaurants to take a rest. Another interesting fact is that the guardrails appear to pedestrians as "seating" rather than as "protective barriers," that they are effective in promoting comfort.

Figure 84: Cat Street (Source: Web - Google image)

Figure 85: Cat Street (Source: Web - Google image)

4. Great Street: Portobello Road - London, England

Background

Portobello Road is a road in the Notting Hill district of the Royal Borough of Kensington and Chelsea in west London, England. It runs almost the length of Notting Hill from south to north, roughly parallel with Ladbroke Grove. On Saturdays it is home to Portobello Road Market, one of London's notable street markets, known for its second-hand clothes and antiques, and for the location of one of the scenes in Bedknobs and Broomsticks. Every August since 1996 the Portobello Film Festival has been held in locations around Portobello Road.

History

Portobello Road is a construct of the Victorian era. Before about 1850, it was little more than a country lane connecting Portobello Farm with Kensal Green in the north and what is today Notting Hill in the south. Much of it consisted of hay fields, orchards and other open land. The road ultimately took form piecemeal in the second half of the nineteenth century, nestling between the large new residential developments of Paddington and Notting Hill. Its shops and markets thrived on serving the wealthy inhabitants of the elegant crescents and terraces that sprang up around it, and its working class residents found employment in the immediate vicinity as construction workers, domestic servants, coachmen, messengers, tradesmen and costermongers. [1] After the Hammersmith and City Railway line was completed in 1864, and Ladbroke Grove station opened, the northern end of Portobello Road was also developed, and the last of the open fields disappeared under brick and concrete. George Orwell lived in Portobello Road in the winter of 1927 after resigning as Assistant Superintendent of the Indian Imperial Police in Burma. [2]

Figure 86: Portobello Road (Source: Author)

Figure 87: Antique store on Portobello Road (Source: Author)

1. A consermonger was a street seller of fruit and vegetables
2. British History website

Portobello Road Market

Portobello Road Market draws many tourists. The main market day for antiques is Saturday. However, there are also fruit and vegetable stalls in the market, which trade throughout the week and are located further north than the antiques, near the Westway Flyover. The market began as a fresh-food market in the nineteenth century and antiques dealers arrived in the 1960s.

Unique storefronts

Portobello Road's distinctiveness does not just rely on its market. A range of communities inhabiting the street and the district contributes to a cosmopolitan and energetic atmosphere, as do the many cafes and restaurants. The architecture also plays a part, as the road meanders and curves gracefully along most of its length, unlike the more formally planned layout of most of the nearby area. Mid to late Victorian terrace houses and shops predominate and are squeezed tightly into the available space, adding intimacy and a pleasing scale to the streetscape. Some buildings are renovated into modern style, contributing to the diversity of the streetscape. There are different types of storefronts that attract pedestrians. Each display window of the retail stores has unique displays and draws the interest of pedestrians. Some cafes are open to the street and create an inviting atmosphere and intimate relationship with pedestrians. The Friends of Portobello campaign seeks to preserve the street's unique dynamic, as the potential arrival of big-brand chain stores threatens the locals.

Figure 88: Unique storefronts and attractive places on Portobello Road (Source: Author)

5. Great Community garden: Liz Christy Garden - New York, NY

Background

Liz Christy Garden is the oldest community garden in New York City that has rare plants and a wonderful pond. The garden has rare plants and a wonderful fish and turtle pond.

Figure 89: Entry of Liz Christy Garden (Source: Web - Flickr)

In 1973 a local resident named Liz Christy and a group of gardening activists known as the Green Guerillas were planting window boxes, vacant lots with "seed bombs" and tree pits in the area. They saw the large rubble-strewn lot as a potential garden and in December, they went to the City to find a way to gain official use of the land. Volunteers hauled the garbage and rubble out, spread donated topsoil, installed a fence and began planting. This was the beginning of the garden. [1]

On April 23, 1974, the City's office of Housing Preservation and Development approved the site for rental as the "Bowery Houston Community Farm and Garden" for $1 a month. Sixty raised beds were planted with vegetables, and then trees and herbaceous borders were added.

In 1986 the Garden was dedicated as the Liz Christy's Bowery-Houston Garden, in memory of its founder. In 1990, after years of uncertainty and a ground swell of support, the local development group, the Cooper Square Committee, pledged to preserve the garden for the neighborhood.


Figure 90: Liz Christy Garden (Source: Web - Flickr)

1. Liz Christy Garden official Website

Accessibility and Comfort

The garden is located right over a New York City subway line. Two main bus stops are by the gates. Local residents use it all the time. The plants and trees are labeled and they have a free booklet on the garden. The paths are wheelchair accessible. Easy to navigate and unlike city streets, all the paths are curved to allow people to take a more casual tour of the garden. Benches are at the end of the paths, and people are encouraged to explore. A gardener is always on hand to answer questions. There is a lot of seating, from single and double chairs to larger benches and picnic tables. Many decide to just sit on the lawn. No vehicles are allowed, just a bike rack inside the gate. It is also very safe as they always have a gardener on duty when they are open. [1]

Figure 91: Variety of flowers in Liz Christy Garden (Source: Web - Flickr)

Variety of experience

The garden is used by hundreds of people a week during the spring, summer and fall. You hear hundreds of birds singing and the sounds of the city vanish once inside. The garden has a pond, a beehive and a wildflower habitat, beautiful wooden furniture, a grape arbor, a grove of weeping birch trees, fruit trees, a dawn redwood, vegetable gardens, berries, herbs and hundreds of varieties of flowering perennials. It is divided into individual areas, designed and tended to by the garden members. General maintenance is shared. The beauties of this natural place can be enjoyed in every season, including winter. People use it to relax, study nature, read, write, do homework, sunbath, picnic, bird watch, turtle watch, talk, date and a few people have even gotten married here.

1. Liz Christy Garden official Website

6. Great Park: Jardin des Plantes - Paris, France

Background

Located in the culturally stimulating Latin Quarter of Paris, Jardin des Plantes is a hidden gem of a park, containing a spacious and well-plotted rose garden, as well as a very large tropical greenhouse. This is the type of place that one could spend a whole day in, for the sprawling grounds feature many user-friendly amenities, such as benches, food kiosks and climbable sculptures.

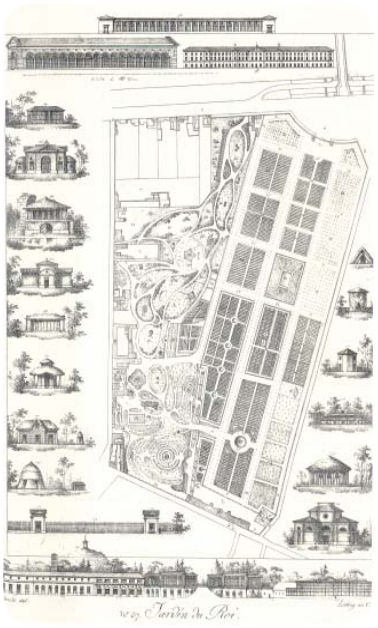


Figure 92: Old plan of Jardin des Plantes (Source: Web - Wikipedia)

Figure 93: Different views of Jardin des Plantes (Source: Web - Flickr)

History

The garden was originally planted by Guy de La Brosse, Louis XIII's physician, in 1626 as a medicinal herb garden. It was originally known as the Jardin du Roi. In 1640 it opened to the public.

After a period of decline, Jean-Baptiste Colbert took administrative control of the gardens. Dr. Guy Crescent Fagon was appointed in 1693, and he surrounded himself with a team of brilliant botanists, including Joseph Pitton de Tournefort, Antoine de Jussieu, Antoine Laurent de Jussieu and his son Adrien-Henri. The Comte de Buffon became the curator in 1739 and he expanded the gardens greatly, adding a maze, the Labyrinth, which remains today. In 1792 the Royal Menagerie was moved to the gardens from Versailles. [1]

1. Project for Public Places Website

Accessibility

This park is at the heart of a wonderful location. One entrance is directly across the street from La Mosquee, a mosque converted into a full-service spa, which serves fabulous tea and pastries in its outdoor garden and indoor lounge. The park is accessible by foot, and is only a few blocks from the Jussieu metro station, which is located across the street from Paris VII, a school of La Sorbonne. Other attractions near the park include the Arabian Institute, with its landmark windows, and of course, the Left Bank of the Seine.

Variety of activities

Jardin des Plantes provides all the amenities for the visitors such as food kiosks, public restrooms, a warm retreat (the greenhouse), and ample seating. As is the case with most Parisian parks, Jardin des Plantes is very clean, with many wastebaskets scattered throughout. Due to its highly populated neighborhood, security is never an issue, and the park is open to foot traffic only.

The park also has the Museum National d'Histoire Naturelle which is made up of four galleries. In addition to the gardens and museums, there is also an aquarium and a small zoo, founded in 1795 by Bernardin de Saint-Pierre from animals of the royal menagerie at Versailles.[1]

The park is never empty throughout all seasons. It is a place that appeals to all age ranges, from the very young to the elderly. It is also a wonderful place to learn about botany, with the many species of plants clearly labeled and described. Because of its proximity to the Arabian Institute and La Mosquee, users of Jardin des Plantes are of a range of ethnicities and cultural backgrounds.

Figure 94: Different activities in Jardin des Plantes (Source: Web - Flickr)

1. Jardin des Plantes official Website

7. Great Mall: Ala Moana Center - Honolulu, HI

Background

Ala Moana Center was once one of the largest shopping centers in the United States and currently holds the distinction of being the largest open-air shopping center in the world. Located on Ala Moana Boulevard in Honolulu, Ala Moana Center is part of the commercial, retail, and residential district of Ala Moana, south of Makiki, east of Kaka'ako, west of Waikīkī and across from Ala Moana Beach Park.

Variety of options

There are more than 260 shops and restaurants, including boutique stores of leading international fashion designers. Ala Moana Center meets different needs of the visitors. They have high-end boutiques for tourists, kitchenware store or drug store for local people, book store for students, or cafe for the people who want to take a rest or just to hang out with friends.

Open-air

The mall is open-air which is suitable for the warm climate in Hawaii. Natural sun light is pleasant for the pedestrians. The mall function as a recreational or gathering place, as some people just visit here to take a walk, sit around, gather, and enjoy the open-air environment.

Figure 95: Open-air at Ala Moana Center (Source: Author)

Landscape and water feature

The mall has a beautiful landscape and water features designed by the local landscape architect, Walters, Kimura, Motoda, Inc., which bring the visitors comfort. It represents the "Hawaiian" sense of place. All the plants are labeled and visitors can also learn about the plants in Hawaii.

Figure 96: Landscape at Ala Moana Center (Source: Author)

Ample seating

The edge of the planters and water features function as seating. The visitors who get tired from shopping or waiting for someone can just sit and relax by the wonderful landscape and water feature instead of going to cafe and pay for it. Children love to watch fish in the water feature while their parents are resting.

Figure 97: Water feature at Ala Moana Center (Source: Author)

8. Great Mall: Waikiki Beach Walk - Honolulu, HI

Background

Waikiki Beach Walk is the largest development project in Waikiki's history. Nearly eight acres along well traversed Lewers Street has been completely rebuilt and transformed into a colorful and spirited showcase. It is an energetic, inviting, eclectic and exciting gathering place for the new Waikiki.

Waikiki Beach Walk is an impressive, new leisure destination to play and to stay. Benefiting from the island's cooling trade winds and year-round excellent weather, an outdoor entertainment plaza, nearly 50 new retailers, 16 dining establishments, and 5 hotels welcome both tourists and local people, redefining the Waikiki experience.

Figure 98, 99, and 100: Waikiki Beach Walk
(Source: Author)

Respecting the culture

Waikiki has a spiritual and social significance. Waikiki Beach Walk honors this with a meaningful design exploring the traditional connection between water, land and people that celebrate Hawaii's ocean heritage. Visitors can discover an ideal expression of Hawaii today. It is a place where people come to experience warm hospitality, a rich confluence of cultures and nature's precious gifts from land and sea.

The design concept incorporates the Hawaiian outrigger canoe and Hawaii's intimate relationship with the ocean. The wavy shaped glass canopies over the outdoor plaza take their inspiration from the movement of the sea, and supporting beams are reminiscent of the `iako (booms) and ama (float) of the outrigger canoe. The canopies are lighted to create a beautifully illuminated contrast to the night sky. [1]

Landscape also plays a great role representing the Hawaiian sense of place. The great lawn area with a shooting water feature functions as a play ground for children. Coconut grove provides an atmosphere of Hawaiian nature.

1. Waikiki Beach Walk official Website

9. Great Cafe: Starbucks at Ward- Honolulu, HI

Background

Starbucks is a dominant multinational coffeehouse chain based in the United States. Starbucks is the largest coffeehouse company in the world, with 7,521 company-owned and 5,647 licensed stores in 40 countries, making a total of 13,168 stores worldwide. In the 1990's, the company was opening a new store every workday, a pace that continued into the 2000's. Domestic growth has since slowed down, though the company continues to expand in foreign markets and is opening 7 stores a day worldwide. [1] You can see Starbucks almost everywhere you go. They just provide coffee and some snacks, but they are very popular.

Starbucks at Ward is located at the corner of Ward Avenue and Auahi Street, across from Ward Warehouse. It is always well occupied with variety range of generations, no matter what the time or day of the week.

The third place

Starbucks is a "third place" (besides home and work) to spend time, and store design is intended to achieve this environment. There are four areas for different needs of the customers. First area is like a living room with comfortable couches where people can relax and enjoy their informal conversation. Second area is a regular cafe setting with tables and hard-backed chairs where people can read, write, or have casual business meetings. Third area is like a study room with a desk and light where people can plug in your computer and study. Forth area is outdoor seating area where people can escape from air conditioned room and enjoy the open air environment. One of the factors that makes this place popular is that there are different choices of the third place settings for different purposes.

Figure 101: Outdoor seating area
(Source: Author)

Figure 102: Regular cafe setting
(Source: Author)

Figure 103: Study area with a desk
(Source: Author)

1. Strarbucks official Website

Open hours

Another factor that makes this place popular is the open hours. This place is always well occupied, no matter what the time or day of the week, especially at night. They are open until mid-night and a lot of people stay there until they close. There are not so many places where people can stay and hang out late at night in Honolulu. Some people just want to hang out with friends and keep talking after diner rather than going to bars. Some people want to study in this comfortable environment with coffee at night.

Semi-public space and Landscape

Outdoor seating area is always packed and it is hard to find a room. People in Hawaii love to stay outside and enjoy the open-air environment. This area is raised and separated from the sidewalk by landscape. Therefore, this area functions a semi-public space. Customers can enjoy watching people walking by, but their privacy is still preserved by the landscape buffer and they are not offended by the direct contact with the pedestrians and cars. Landscape plays a great role to create a pleasant atmosphere. If you are lucky, you can see different kinds wild birds wondering in this urban green space. Tiki torches are lit at night to emphasize Hawaiian ambiance instead of bright light.

Figure 104: Outdoor seating area with landscape
(Source: Author)

Figure 105: Wild bird in the landscaped area
(Source: Author)

10. Great Cafe: Coffee Line - Honolulu, HI

Background

Coffee Line is situated in YMCA building across from University of Hawaii at Manoa. It is occupied with the students and faculty at the University. It is a place for them to have coffee or lunch, gather, and share their ideas.

Figure 106: Order counter at Coffee Line (Source: Author)

Figure 107: Cafe space at Coffee Line (Source: Author)

Owner's pride

Denis, the owner of Coffee Line prepares everything by himself. His food is simple, but his commitment to his work provides a good quality. You can tell his pride from his kitchen full with different kitchenware and tools. Customers love his food and most of them come to Coffee Line regularly.

Figure 108: Denis' kitchen (Source: Author)

Semi-open space

The main cafe space is in a semi-open space with a high ceiling providing natural sun light and the "openness" feeling. The space is filled with different plants and you feel like you are having coffee in a jungle. Different shapes and colors of tables and chairs, which Denis collected from different people and places, gives an interesting eclectic feeling.

Figure 109: Semi-open space at Coffee Line (Source: Author)

Outdoor seating area

Coffee Line also has outdoor seating area surrounded by many plants. This space does not face the sidewalk and provides privacy for people who want to enjoy peace in a hidden garden.

Figure 110: Outdoor seating area at Coffee Line (Source: Author)

Sharing art and cultures

Coffee Line is a great place to share cultures. There is a bulletin board full with art and cultural information such as art galleries, cultural events, or interesting lectures. There are many magazines for customers to read. The topic range of the magazines are amazing such as architecture, traveling, painting, sculpture, or computer graphics. Denis also hangs paintings done by art students at University of Hawaii and it is a great opportunity for the painters to display their art in public. Denis collects a number of interesting weird things such as old scale, microscope, instruments, or things you cannot even tell what it is. It is like an antique store and it is just fun to be there and find out what is there. Coffee Line is not just a place to have coffee or lunch, but it is a place for people to gather, interact, get information, find new things, and share art and cultures.

Figure 111: Bulletin board at Coffee Line (Source: Author)

Figure 112: Magazines at Coffee Line (Source: Author)

Figure 113: Paintings at Coffee Line (Source: Author)

11. Great Workplace: Paragraph - New York, NY

Background

Paragraph is dedicated to providing an affordable and tranquil working environment for writers of all genres. It is located on 14th street between Fifth and Sixth Avenues, close to Union Square. It is open 24 hours a day, 7 days a week, 365 days a year. Paragraph was created by writers for writers, with an understanding that writers work best in a quiet, comfortable space away from the hurry and obligation of urban life.

Paragraph is founded by Lila Cecil and Joy Parisi. They met at The New School's graduate creative writing program. Tired of slogging it out in jobs they did not have their hearts in and desperate for a quiet place to write and a community of writers similar to the one they had found in graduate school, they decided to open their own writing center.

Figure 114: Different spaces at Paragraph (Source: Paragraph official website)

The space for specific needs

Paragraph occupies the entire top floor of a three-story building. The 2500 sq. ft. loft space is divided into two areas; a writing room and a kitchen and lounge area. The writing room has 38 partitioned desks where writers work in a quiet relaxed atmosphere. Workspaces provide a feeling of privacy, each with blocked sight lines from other working writers.

There is a couch in front of the fireplace for those who want to take a break from the page. A spiral staircase leads up to the balcony with a library of books and a comfortable chair. The kitchen and lounge area is in the rear of the space and contains a kitchenette, a large round table and smaller cafe tables. There is a refrigerator and cabinets to store food, as well as a microwave, toaster oven and coffee maker. High-speed, wireless internet access is available throughout the space, as well as a laser printer for members to use. [1]

1. Paragraph official Website

12. What makes an identity?

What makes an identity? And what kind of an identity does Makiki need? It is important that an identity should be timeless and able to change over time. Therefore, Makiki needs places where an identity can grow over time through mixed use development. Identity should evolve, but not be applied. For example, it is not effective to create a Japan Town just because the dominant cultural background in Makiki is Japanese now. Trends change over time. In the future, Chinese or Korean may become dominant culture in Makiki.

From the case studies, an identity is achieved by different factors. Three important factors that make an identity are culture, public space, and activities. These factors can be measured by five basic elements; diversity, experience, appearance, comfort, and flexibility. The graphics below is a tool to describe an identity. Each element has a measurement barometer of 1 through 10. (1 = poor, 5 = average, 10 = excellent) In order to understand what an identity for a place is, it is effective to look at some of the case studies and evaluate them by using this tool.

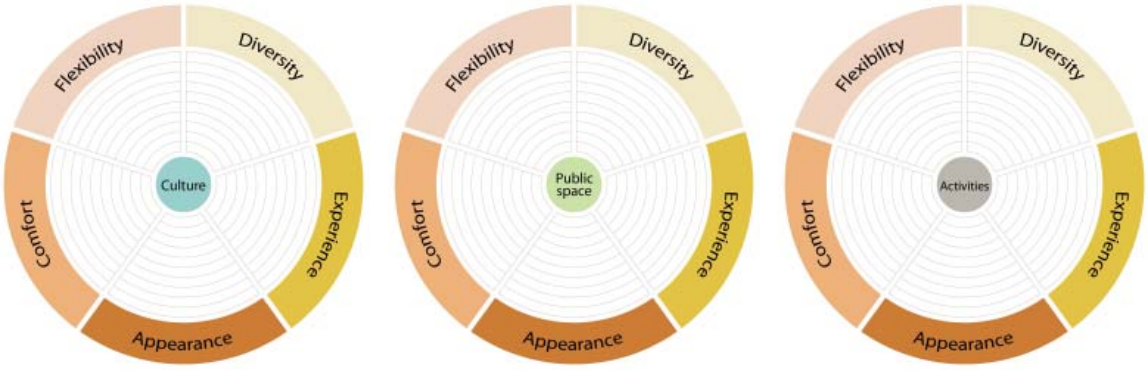


Figure 115: Three factors of an identity; Culture, Public space, and Activities (Source: Author)

Each factor consists of different ingredients.

Culture	People • Architecture • Art • History • Food • Music • Plants • Language ...etc.
Public space	Landscape • Storefront • Facade • Sidewalk • Seating • Lighting ...etc.
Activities	Walk • Talk • Gather • Meet • Watch • Find • Eat • Shop • Play • Study • Work ...etc.

Identity of Makiki

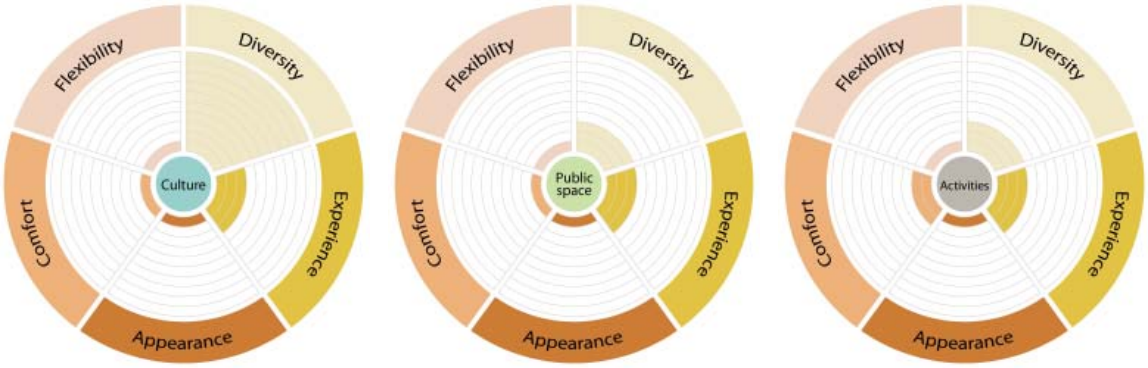


Figure 116: Makiki - Three factors of the identity; Culture, Public space, and Activities (Source: Author)

Culture

Diversity

The people in Makiki have diverse cultural background and consist of Japanese, White, Chinese, Korean, Hawaiian, Filipino, Vietnamese, Black, Mixed, and others. - 10 points

Experience

However, you cannot experience the cultural diversity. There are only few Asian food restaurants. - 3 points

Appearance

It is hard to tell the cultural diversity in Makiki by the appearance of the entire neighborhood except for some historical buildings on Wilder Avenue. - 1 point

Comfort

There is no place for people with specific cultural background where they can go and feel comfortable. - 1 point

Flexibility

There is no flexibility to allow different cultures to grow in Makiki. Parks can be one of a flexible places to have different cultural events, but Makiki District Park is never used for those purposes. - 1 point

Public space	Diversity	There is not enough public space. Makiki District Park and Makiki Shopping Village are the only places where people can go and interact each other. - 3 points
	Experience	Walking experience is not pleasant on Wilder Avenue because the sidewalk is narrow and the street is not well landscaped. - 3 points
	Appearance	Appearance of Makiki is not attractive. There are a number of old and shabby low-rise apartments along Wilder Avenue. A lot of buildings are oriented sideways and the blank walls are facing the street. - 1 point
	Comfort	Makiki District Park is well occupied, but there is not enough seating for people to take a rest and relax after the activities. It is not comfortable to walk on the sidewalk because it is narrow and it does not provide enough shading. - 1 point
	Flexibility	The sidewalk is narrow and it does not have flexibility to allow different events to occur such as street performance. - 1 point
Activities	Diversity	There are different activities in Makiki District Park such as gardening, soccer, basketball, tennis, swimming or skateboarding. However, Makiki needs more place where people can have a variety of activities. - 3 points
	Experience	The experience is limited to the activities in Makiki District Park and small amount of shopping at Makiki Shopping Village. - 3 points
	Appearance	Since the activity area is limited, Wilder Avenue does not look vibrant at all. It is unfortunate that the half of the facades of Makiki Shopping Village is blank with few openings and it is hard to see the activities happening there. - 1 point
	Comfort	Makiki District Park provides a comfortable environment for the different activities surrounded by some landscape. However, safety is an issue at night. - 2 points
	Flexibility	The lawn area of Makiki District Park is flexible to allow different activities to occur such as soccer, football, running, and playgrounds for children. However, it is the only place that allow the flexibility of activities in Makiki. - 1 point

Identity of Hillside Terrace

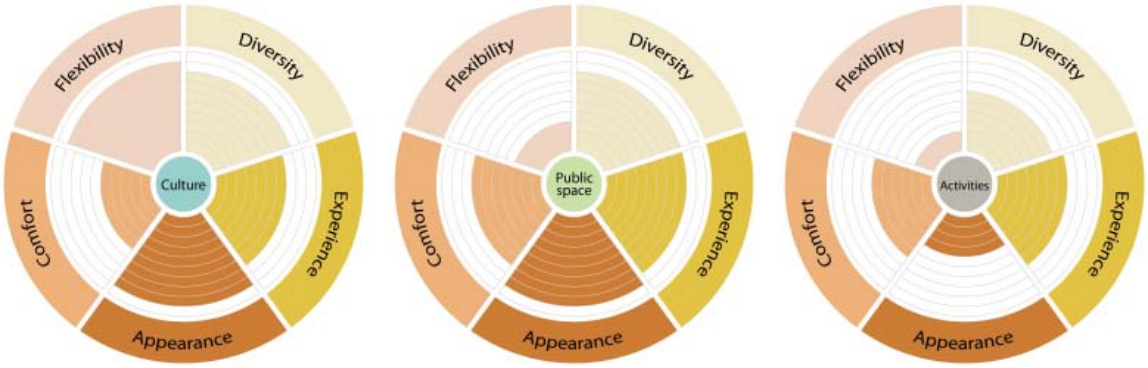


Figure 117: Hillside Terrace - Three factors of the identity; Culture, Public space, and Activities (Source: Author)

Culture

Diversity

Although the cultural background of the residents and visitors is not diverse, Hillside Terrace has a diversity in terms of architecture such as different facades, spatial use, and materials. - 8 points

Experience

You can have different cultural experience at Hillside Terrace, as there is an art gallery with a variety of collections that changes frequently and some stores carries interesting goods from different cultures. - 7 points

Appearance

Architecturally, the appearance receives a good reputation, as Hillside Terrace is designed by the Japanese architect, Fumihiko Maki. - 9 points

Comfort

The art gallery has seating area and cafe where visitors can take a break, relax and share their impression about the art there . - 5 points

Flexibility

Architecturally, Hillside Terrace is flexible. It has been changing over time according to the trend. Each facade has different material and different look. Also, there are flexible spaces that allow different cultural events. - 9 points

Public space	Diversity	Hillside Terrace has a variety of ingredients of public space such as path, platforms, stairs, seating area, and courtyards. - 8 points
	Experience	A network and different width of paths, platforms, and stairs create a spacious leisurely experience that leads pedestrians into the inner public space, with its courtyards, shops, and restaurants. - 8 points
	Appearance	The public space appearance of Hillside Terrace is attractive. The courtyards are especially pleasing. Some are beautifully tiled, others are well landscaped. - 9 points
	Comfort	There are many places to sit down and relax such as seating area, cafe, and restaurant. Also, the landscape provides shade and comfortable atmosphere for the residents and the visitors. - 7 points
	Flexibility	The flexible space is limited to the gallery area, but courtyards are sometimes used for occasional events. - 3 points
Activities	Diversity	The activities are relatively diverse at Hillside Terrace. You can walk, shop, eat, or enjoy art. People also work there, as there are some office space in the complex. - 6 points
	Experience	As all the retail stores are strictly selected by the architect, Hillside Terrace has a high quality of different experiences. - 7 points
	Appearance	Since a lot of public spaces are situated in the inner space, it is hard to see the activities from the street. However, it works well at Hillside Terrace because path and stairs draw people in. - 4 points
	Comfort	The high quality of spaces provide a comfortable activities for the residents and the visitors . - 6 points
	Flexibility	Again, the space for flexible activities such as performance or events is limited to the gallery area and the courtyards. - 2 points

Identity of Silodam - Amsterdam, The Netherlands

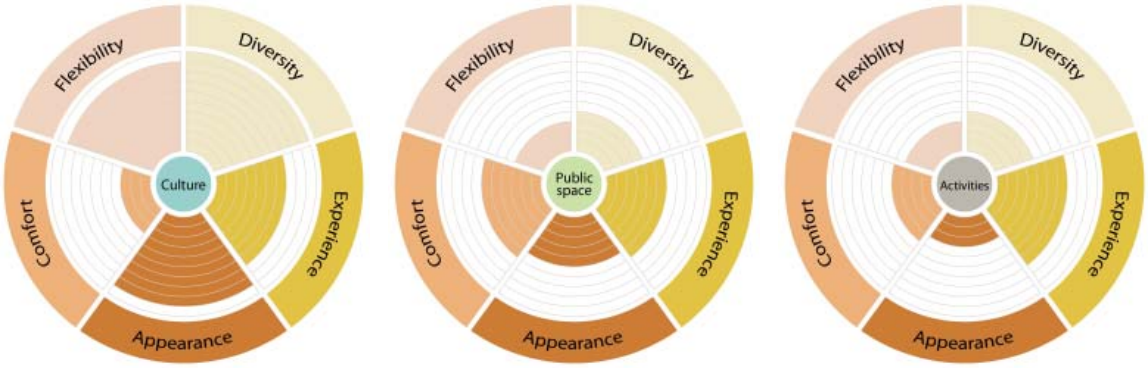


Figure 118: Silodam - Three factors of the identity; Culture, Public space, and Activities (Source: Author)

Culture

Diversity

Although the cultural background of the users is not diverse, Silodam has a diversity in terms of architecture such as different colors, materials, and spatial uses. - 10 points

Experience

Spatial experience in interesting at Silodam. The commercial and public areas are not located exclusively on the lower floors, but they are distributed at all levels of the building. - 7 points

Appearance

Appearance of the building is also interesting in terms of Architecture. Each group of units using different colors and materials represents a specific type of dwelling, structure and facade. - 9 points

Comfort

Architecturally, residential space provides comfort. Each unit has the characteristics of houses with their own entrance hall, a corridor, a balcony, a garden and a patio in a vertically arranged neighbourhood. - 3 points

Flexibility

The apartments are not only different in size and color, but also by the placement of the interior walls that can be moved and replaced by future inhabitants in order to meet the needs of individual clients. - 9 points

Public space	Diversity	The public areas are distributed at all levels of the building. There are roof top open space, spatial hall under the building and restaurants. - 4 points
	Experience	Residents can walk through the building passing different facades and roof tops, under the building through the hall to the terrace, or along the marina where boats can be docked. - 6 points
	Appearance	As the public areas are not located on the lower floors, it is hard to tell that there are some great public areas from its appearance. - 5 points
	Comfort	However, the panoramic view of the river all the way to the old city centre and the wharf from the public space provides comfort to the users. - 6 points
	Flexibility	The spatial hall under the building could be used for different purposes, but this kind of flexible public space is limited. - 3 points
Activities	Diversity	Approximately 80% of the building is occupied by residential units. However, there are some other spaces for different activities such as office space, public space, and restaurants. - 4 points
	Experience	The experience of the activities in Silodam is special because of the interesting spatial arrangement and the amazing view. - 7 points
	Appearance	Although there are places for different activities in Silodam, it cannot be seen from the street because the public areas are not located on the lower floors. - 3 points
	Comfort	There are some seating area in the public space with a great view where people can relax and talk during the activities. - 4 points
	Flexibility	Again, the flexible space for different activities is limited to the spatial hall under the building. - 3 points

Identity of Cat Street - Tokyo, Japan

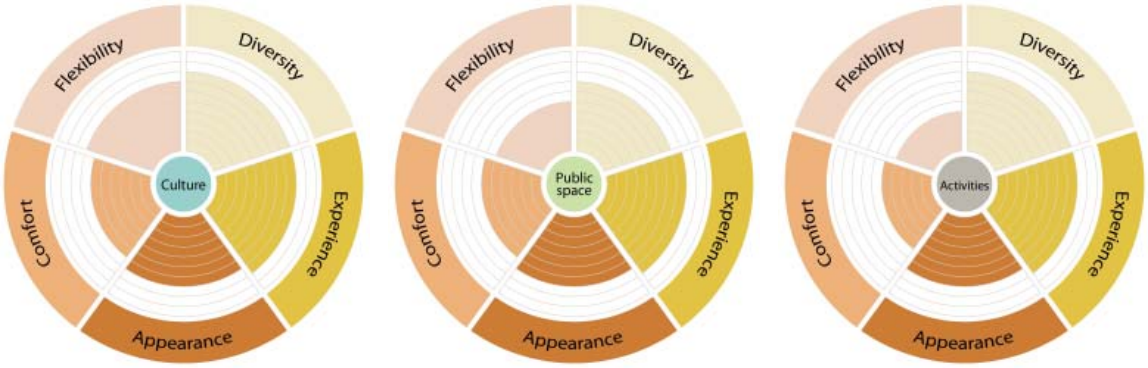


Figure 119: Cat Street - Three factors of the identity; Culture, Public space, and Activities (Source: Author)

Culture

Diversity

There are mainly Japanese and some foreign tourists on Cat Street. However, culture here is pretty diverse, as there are many different types or stores, cafes, restaurants, and art studios. - 8 points

Experience

As there are many different types of stores, cafes, restaurants, and art studios, visitors can have a variety of cultural experience. - 8 points

Appearance

Visitors can sense the culture from the appearance of the street such as different types of signage, storefronts, and architecture. - 7 points

Comfort

There is a variety of people of different ages and different artistic philosophy. Different stores have diverse culture. Visitors feel comfortable because Cat Street has options of cultures for them that are suitable for their own philosophy. - 6 points

Flexibility

The options are flexible on Cat Street. For example, visitors can enjoy Japanese contemporary art at an art studio in a old Japanese style house before browsing European furniture and after having Indian food. - 7 points

Public space	Diversity	Cat Street has a variety of storefronts with unique displays and different facades that please the pedestrians. - 7 points
	Experience	Walking experience is pleasant on Cat Street because of the diversity and the meandering flow of the street. - 8 points
	Appearance	Appearance of Cat Street is very exciting. There are a number of old and shabby low-rise apartments along Wilder Avenue. A lot of buildings are oriented sideways and the blank walls are facing the street. - 7 points
	Comfort	Cat Street has a number of places where people can relax and feel comfortable such as cafes and restaurants. Guardrails also functions as a seating and a lot of people sit there and enjoy talking with friends or watching other people walking by. - 6 points
	Flexibility	There are some flexible spaces where cultural events can occur such as street performers or musicians. - 5 points
Activities	Diversity	Activities on Cat Street is diverse. People can walk, eat, shop, find new culture, enjoy arts and music. - 8 points
	Experience	Because of the variety of options of activities on Cat Street, the experience there is very exciting for people from different cultures and of different ages. - 8 points
	Appearance	Cat Street is always well occupied. It is pleasing just to looking at the vibrant activities on the street. People can also watch the activities inside the stores through a variety of different storefront. - 7 points
	Comfort	Cars are not allowed on this street except for emergency cars, service cars, and cars for the residents. Therefore, pedestrians fell comfortable walking on the street not worried about the cars. - 5 points
	Flexibility	Some of the activities on the street is flexible other than cultural events or street performance such as street vendors. - 4 points

Identity of Jardin des Plantes - Paris, France

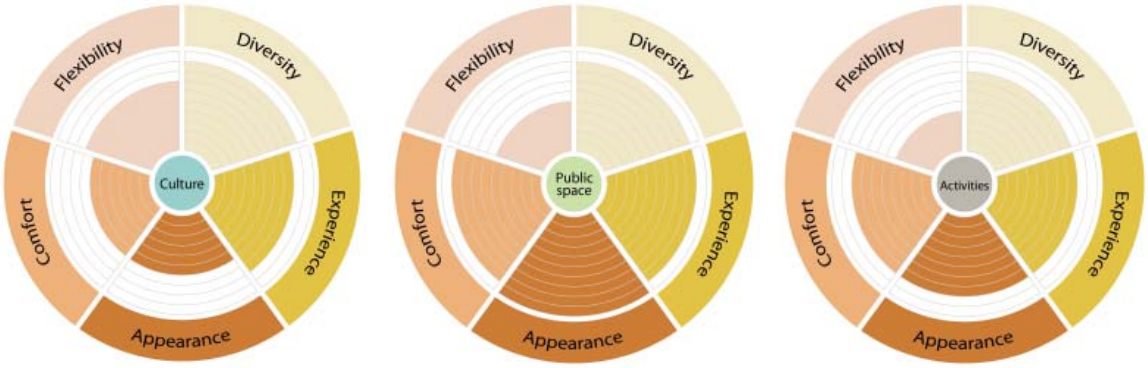


Figure 120: Jardin des Plantes - Three factors of the identity; Culture, Public space, and Activities (Source: Author)

Culture

Diversity

Because of its proximity to the Arabian Institute and La Mosquee, users of Jardin des Plantes are of a range of ethnicities and cultural backgrounds. The park also has different cultural opportunities such as art and landscape. - 9 points

Experience

There are a number of spaces where people can experience different cultures. You can experience art at the museum and learn about plants at a variety of different types of gardens. - 8 points

Appearance

The museum building has a grand historical background and it appears to be a cultural place with beautiful gardens. - 6 points

Comfort

Cultural comfort is achieve by a number of visitors with different background and also by the safe environment where you can absorb different cultures. - 6 points

Flexibility

The variety of options allow people to have a flexible learning experience. - 7 points

Public space	Diversity	Jardin des Plantes has a variety of public green spaces with all kinds of different landscape and pathways. - 9 points
	Experience	Walking experience is very pleasant at Jardin des Plantes because of the beautiful landscape and different shapes of the pathways everywhere. - 9 points
	Appearance	Appearance is attractive because of the nicely landscape gardens with different plants and beautifully laid out pathways. - 10 points
	Comfort	There are a number of seating by the beautiful landscape under the shade where people can relax and feel comfortable. - 9 points
	Flexibility	Some open green spaces are used for flexible activities or freely used by the children. There are also movable kiosks that allow flexible arrangement. - 5 points
Activities	Diversity	Activities in Jardin des Plantes is diverse. There are museum, gardens, amusement facilities, or small zoo. - 8 points
	Experience	Visitors can have different experience through different activities such as enjoying art, learning about plants, walking through beautiful landscape, and watching different animals. - 8 points
	Appearance	Since most spaces are open-air except for the museum and the green house, activities are visible. Visible activities makes a place vibrant. - 8 points
	Comfort	Activities are available with comfort because of the safe environment, beautiful landscape, and many seating areas. - 8 point
	Flexibility	The activity at the park is diverse, but there are not so many flexible outdoor events such as art festival or performance. - 4 points

Identity of Coffee Line - Honolulu, HI

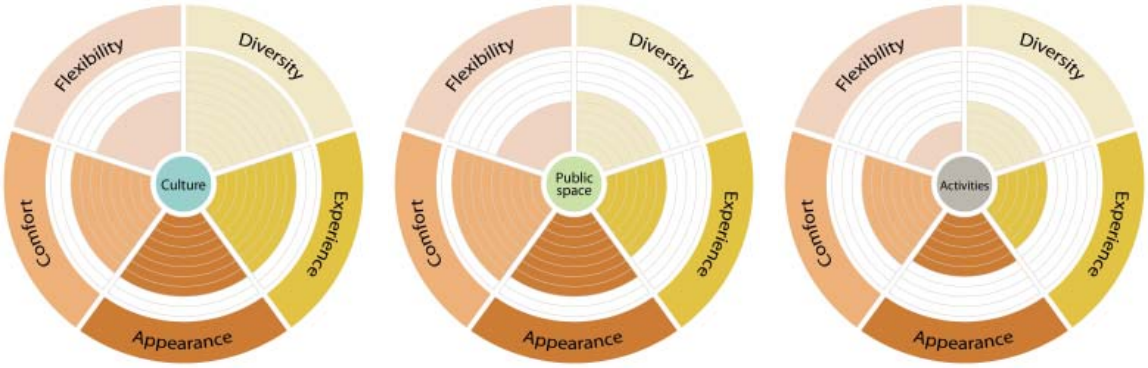


Figure 121: Coffee Line - Three factors of the identity; Culture, Public space, and Activities (Source: Author)

Culture

Diversity

Customers at Coffee Line have a variety of cultural background, as most of them are the students and faculties from University of Hawaii. Coffee Line also has different arts, plants, and interesting goods to stimulate people. - 10 points

Experience

The experience is great at Coffee Line. The food is good. You can enjoy different arts and finding interesting goods that Denis collects. You can get information about different cultural events from magazines and bulletin boards. - 8 points

Appearance

Coffee Line has an eclectic atmosphere with a lot of cultural things all over that provides a charming appearance. - 8 points

Comfort

Customers can meet people from the same field of interest because of the proximity to University of Hawaii, especially School of Architecture. - 8 points

Flexibility

At the same time, customers can also meet people from different cultural background or field of interest and share their culture. - 6 points

Public space	Diversity	Since this is a cafe, public space is not very diverse. However, Coffee Line is divided into three areas; quick eat-and-go area near the counter, semi-open cafe space, and outdoor seating area. - 6 points
	Experience	Each space has different experience. At eat-and go area, you are close to Denis and talk with him. The semi-open cafe space has spacious atmosphere. And outdoor seating area, you have a privacy surrounded by many plants. - 6 points
	Appearance	Coffee Line is full of interesting goods and plants and provides a pleasant appearance for the customers. - 8 points
	Comfort	As each space has different experience, customers can have different level of comfort. A number of different plants plays a great role to provide comfort as well. - 9 points
	Flexibility	As all the chairs and tables are movable and there is no order like a normal cafe, you can feel free to rearrange your space for different purposes such as, meeting, writing, or reading. - 5 points
Activities	Diversity	Since this is a cafe, activities are limited. However, Coffee Line is used for different purposes such as meeting, writing, or reading. - 5 points
	Experience	Denis hangs paintings done by art school at University of Hawaii. Painters can experience the opportunity to display their art in public and customers can experience different art. - 5 points
	Appearance	Coffee Line is hidden. You cannot see what is going on from the street. However, it works well and it is well occupied with regular customers who likes this sense of " a hole in the wall". - 6 points
	Comfort	Activities are available with comfort because of the good food, many plants, spacious cafe space and privacy. - 7 points
	Flexibility	Coffee Line provides information about different events, but they rarely have events at their own space. - 3 points

13. What is learned from the case studies

Defining an identity for a neighborhood is very conceptual and sometimes vague, but it is more understandable by evaluating different places using the tools above. The most obvious result from the evaluation is that flexibility is hard to achieve, no matter what the factors are. Flexibility is the key to design a place where an identity can change according to the trend at each period of time. Another finding is that landscape plays a great role in providing comfort and forming an identity in most cases.

The focus of this project is how to form an identity of the Makiki neighborhood. The case studies above are certain places and the scale is different from Makiki. However, it is important to see identities in a small scale and apply that in a neighborhood scale. Moreover, an identity is created by groups of different places. It is ideal to design a neighborhood that has great places where an identity can grow over time. The goal is to create a neighborhood that can be evaluated with all-10-points factors.

Chapter 5: Implementation Strategy - Zoning

Zoning

The existing zoning is regulated by the City and County of Honolulu Land Use Ordinance (LUO). The purpose of LUO is to regulate land use in a manner that will encourage orderly development in accordance with adopted land use policies, and to promote and protect the public health, safety and welfare. It is the intention of the council that the provisions of the LUO provide reasonable development and design standards for the location, height, bulk and size of structures, yard areas, off-street parking facilities, and open spaces, and the use of structures and land for agriculture, industry, residences or other purposes. [1]

The main focus of this chapter is to analyze the existing zoning and consider if it is appropriate for a high-density mixed use neighborhood. If it is inappropriate, the analysis of the existing condition will be followed by proposed condition.

1. Zoning districts

It is necessary to change the existing zoning districts when it does not allow mixed use in a neighborhood. The next step is to determine which mixed use district is suitable for the neighborhood. The existing LUO includes the following mixed use types:

- AMX-1 (Apartment mixed use district: Low-density)
- AMX-2 (Apartment mixed use district: Mid-density)
- AMX-3 (Apartment mixed use district: High-density)
- BMX-3 (Business mixed use district: Community)
- BMX-4 (Business mixed use district: Central)

1. Department of Planning and Permitting: *Land Use Ordinance, Honolulu, HI, 2003*

Purpose and intent of Apartment mixed use district

The purpose of the apartment mixed use districts is to allow some commercial uses in apartment neighborhoods. The additional commercial uses shall be permitted under varying intensities and are intended to support the daily and weekly commercial service needs of the neighborhood, conserve transportation energy by lessening automobile dependency, create more diverse neighborhoods and optimize the use of both land and available urban services and facilities. Mixing may occur horizontally and vertically, but controls are established to maintain the character of these neighborhoods primarily as apartment neighborhoods. (from Land Use Ordinance, Sec. 21-3.90)

Purpose and intent of Business mixed use district

The purpose of the business mixed use districts is to recognize that certain areas of the city have historically been mixtures of commercial and residential uses, occurring vertically and horizontally and to encourage the continuance and strengthening of this pattern. It is the intent to provide residences in very close proximity to employment and retail opportunities, provide innovative and stimulating living environments and reduce overall neighborhood energy consumption.

The intent of the BMX-3 community business mixed use district is to provide areas for both commercial and residential uses outside of the central business mixed use district and at a lower intensity than the central business mixed use district. Typically, this district would be applied to areas along major thoroughfares adjacent to B-2, BMX-4, A-3, AMX-2 and AMX-3 zoning districts. It is also intended that it be applied to areas where the existing land use pattern is already a mixture of commercial and residential uses, occurring horizontally, vertically or both.

The intent of the BMX-4 central business mixed use district is to set apart that portion of Honolulu which forms the city's center for financial, office and governmental activities and housing. It is intended for the downtown area and not intended for general application. It provides the highest land use intensity for commerce, business and housing. (from Land Use Ordinance, Sec. 21-3.110)

AMX is suitable for a neighborhood like Makiki

A neighborhood that already has a strong character of residential neighborhood (like Makiki) should maintain the character by introducing AMX as it is intended to:

- support the daily commercial service needs of the neighborhood
- conserve transportation energy by reducing automobile dependency
- create more diverse neighborhoods
- optimize the use of both land and available urban services and facilities

2. Existing maximum building area and density

The existing zoning regulates the maximum building area and density. It is important to analyze different lot sizes and the relationship between each lot size, existing building area, and existing maximum density in order to visualize:

- Actual size of existing maximum building area compared to the lot size
- Actual volume of existing maximum density
- If the existing maximum building area and density are appropriate or not

Lot area: less than 10,000 s.f. (Example lot area: 8,000 s.f.)

- Maximum building area: 60% of zoning lot (Lot area: less than 7,500 s.f.)
- AMX-1: FAR = (.00003 x lot area) + 0.3 = (.00003 x 8,000) + 0.3 = 0.54
- AMX-2: FAR = (.00009 x lot area) + 0.4 = (.00009 x 8,000) + 0.4 = 1.12
- AMX-3: FAR = (.00014 x lot area) + 0.6 = (.00014 x 8,000) + 0.6 = 1.72

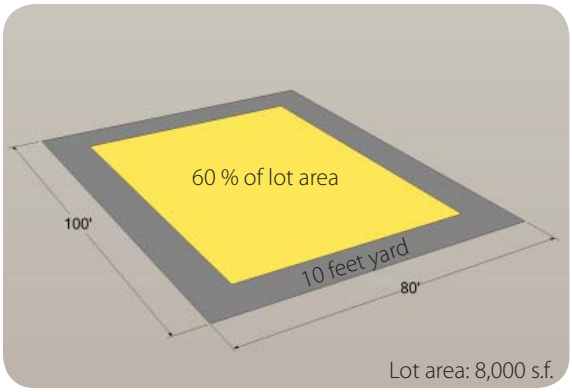


Figure 122: Maximum building area (Source: Author)

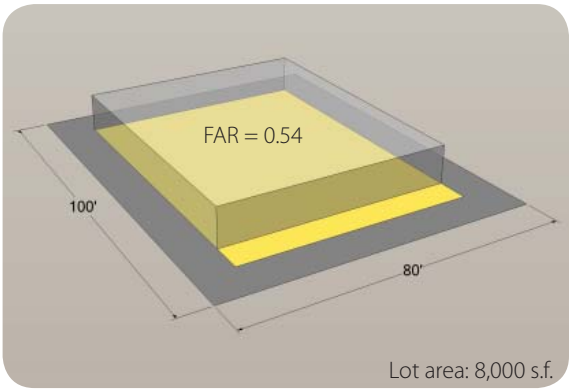


Figure 123: FAR for AMX-1 (Source: Author)

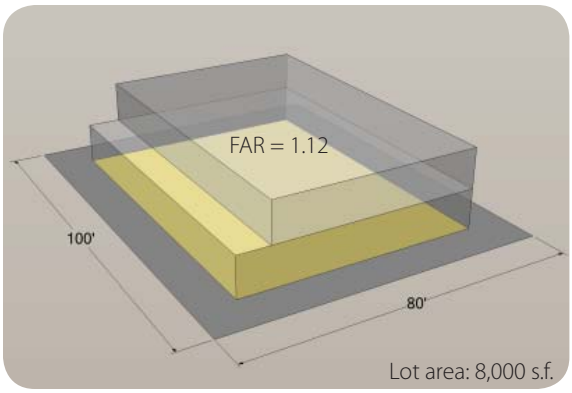


Figure 124: FAR for AMX-2 (Source: Author)

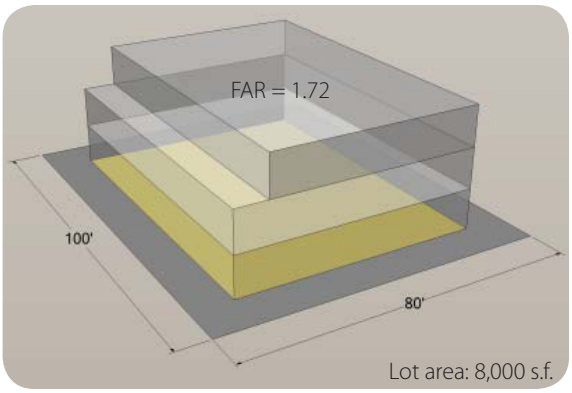


Figure 125: FAR for AMX-3 (Source: Author)

Lot area: 10,000 to 20,000 s.f. (Example lot area: 15,000 s.f.)

- Maximum building area: 50% of zoning lot (Lot area: 7,500 to 20,000 s.f.)
- AMX-1: FAR = (.00001 x lot area) + 0.5 = (.00001 x 15,000) + 0.5 = 0.65
- AMX-2: FAR = (.00002 x lot area) + 1.1 = (.00002 x 15,000) + 1.1 = 1.4
- AMX-3: FAR = (.00004 x lot area) + 1.6 = (.00004 x 15,000) + 1.6 = 2.2

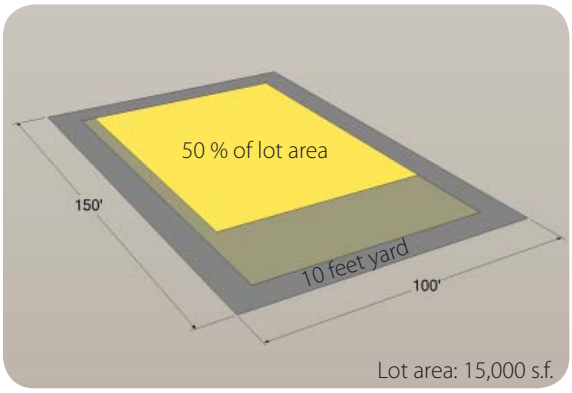


Figure 126: Maximum building area (Source: Author)

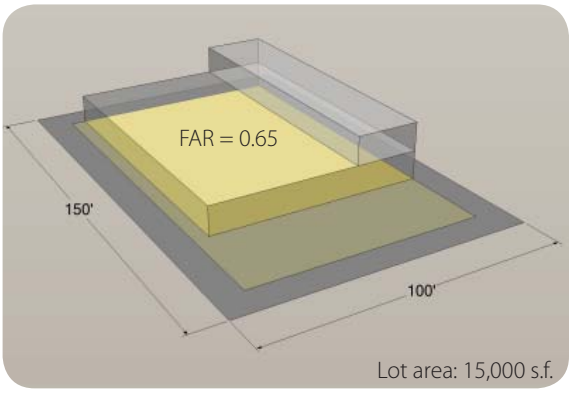


Figure 127: FAR for AMX-1 (Source: Author)

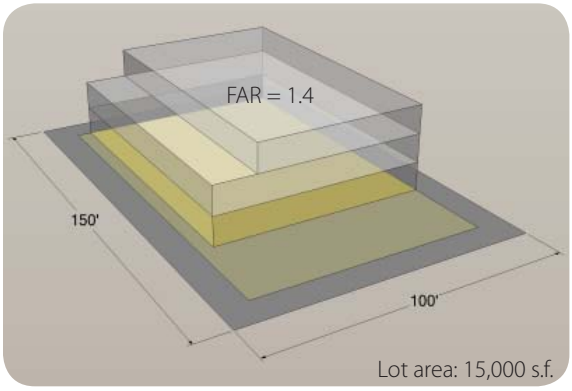


Figure 128: FAR for AMX-2 (Source: Author)

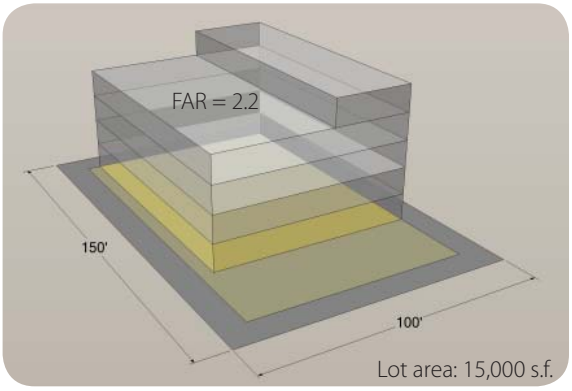


Figure 129: FAR for AMX-3 (Source: Author)

Lot area: 20,000 to 40,000 s.f. (Example lot area: 30,000 s.f.)

- Maximum building area: 40% of zoning lot (Lot area: over 20,000 s.f.)
- AMX-1: FAR = (.00001 x lot area) + 0.5 = (.00001 x 30,000) + 0.5 = 0.8
- AMX-2: FAR = (.00002 x lot area) + 1.1 = (.00002 x 30,000) + 1.1 = 1.7
- AMX-3: FAR = (.00002 x lot area) + 2.0 = (.00002 x 30,000) + 2.0 = 2.6

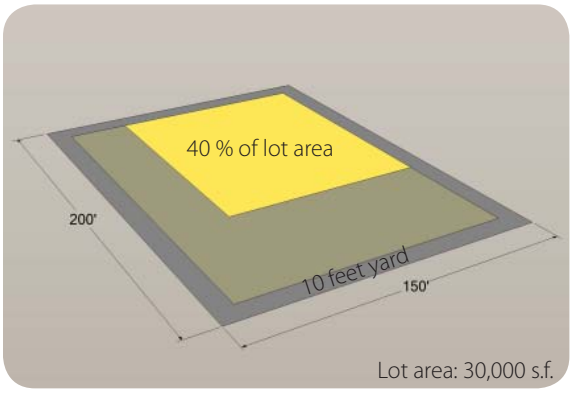


Figure 130: Maximum building area (Source: Author)

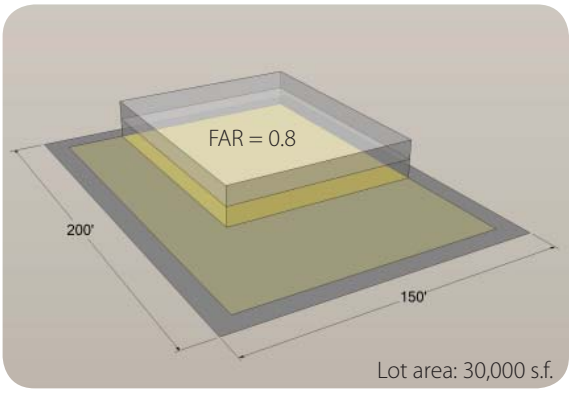


Figure 131: FAR for AMX-1 (Source: Author)

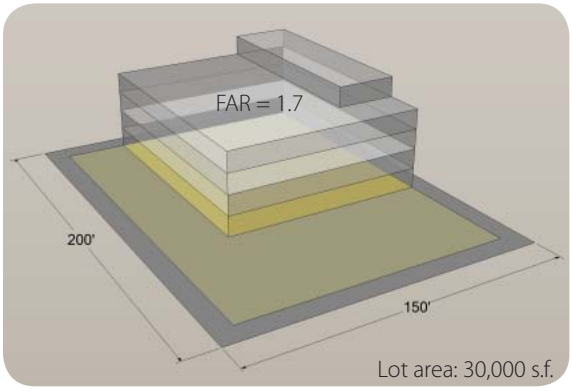


Figure 132: FAR for AMX-2 (Source: Author)

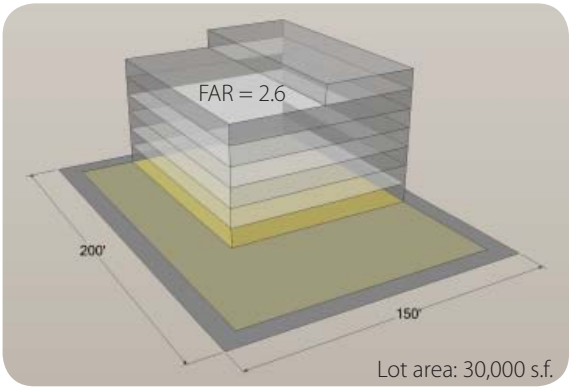


Figure 133: FAR for AMX-3 (Source: Author)

Lot area: over 40,000 s.f. (Example lot area: 50,000 s.f.)

- Maximum building area: 40% of zoning lot (Lot area: over 20,000 s.f.)
- AMX-1: FAR = 0.9
- AMX-2: FAR = 1.9
- AMX-3: FAR = 2.8

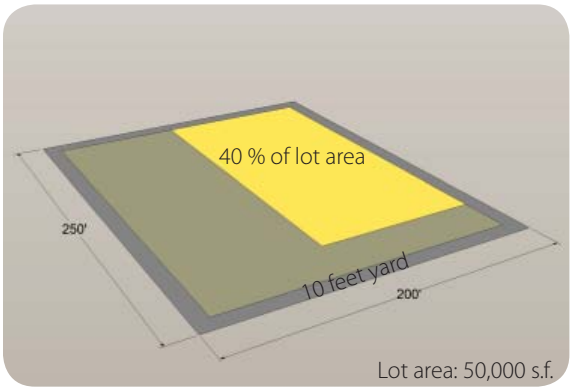


Figure 134: Maximum building area (Source: Author)

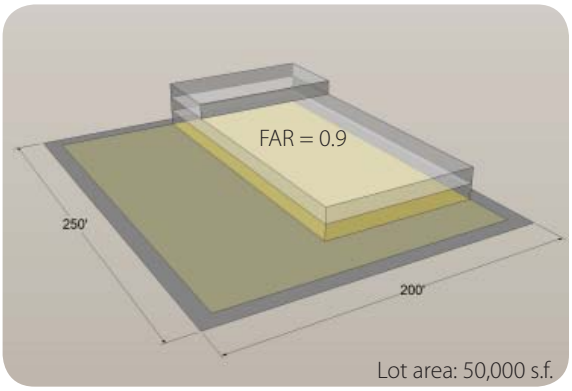


Figure 135: FAR for AMX-1 (Source: Author)

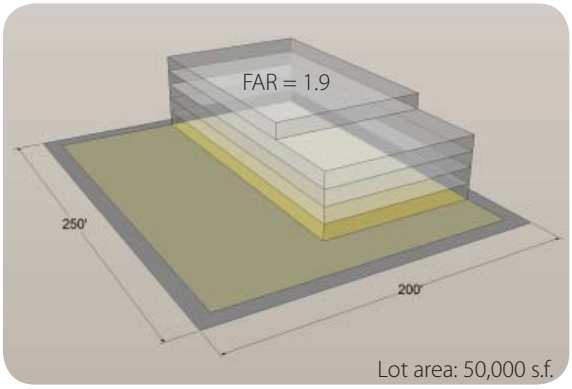


Figure 136: FAR for AMX-2 (Source: Author)

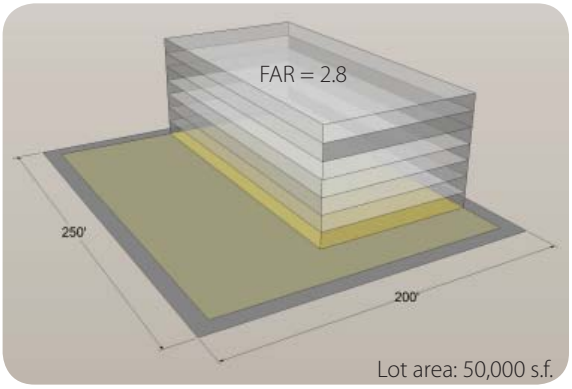


Figure 137: FAR for AMX-3 (Source: Author)

AMX-2 and AMX-3 are suitable for a neighborhood like Makiki

In order to create a vibrant neighborhood as a new central urban area, a certain level of density is required to support the activities in a mixed use development. It is obvious from the existing condition above that the density for AMX-1 is not dense enough. Also, the maximum height for AMX-1 is 30 feet, which eliminates the possibility of a high-density development. Therefore, the main focus of this chapter should be AMX-2 and AMX-3.

Constraints of existing maximum building area and density

Maximum building area provides an opportunity for open space around the building when the open space is utilized for people to gather and interact such as plazas or pocket parks. However, the open spaces could be turned into factors for unattractive streetscape such as parking lot.

Figure 138: Open space used for plaza (Source: Author)

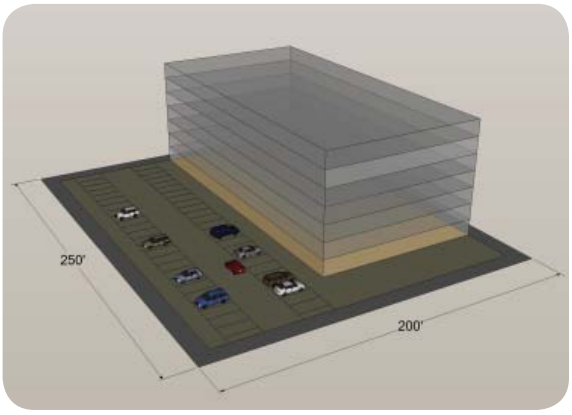


Figure 139: Open space usde for parking (Source: Author)

How about the density? Although it was concluded that AMX-1 is not dense enough, it is still hard to tell from the analysis of existing condition above whether the density is appropriate or not. The adequacy of density could be measured by the use of the building. The use which takes up a lot of space is parking. It could be one of the efficient way to visualize the adequacy of density by analyzing how parking space governs the building density. The number of parking is determined by the parking requirement. The next section will focus on the existing parking requirement.

3. Existing parking requirement

Building form is often governed by the parking. It is important to see the relationship and ratio between the parking and the rest of the building in order to visualize:

- Possibility of the building form
- Density of the building without the parking
- If the existing parking requirement is appropriate or not

The examples below show the maximum parking for the rest of the building. The steps of the procedure used here are:

1. Provide possible maximum parking for the lot size (shown as orange blocks)
2. Calculate the total floor area of other uses except for the parking (shown as gray blocks)
3. Check the existing parking requirement for the total floor area in each category
4. Compare the requirement with the possible maximum parking

Lot area: less than 10,000 s.f. (Example lot area: 8,000 s.f.)

AMX-2

- Commerce and Business: 13 stalls (1 per 400 s.f.) = enough
- Food service: 17 stalls (1 per 300 s.f.) = enough
- Dwellings, multifamily - unit size 600 s.f. or less: 9 stalls (1 per unit) = enough
- Dwellings, multifamily - unit size 800 s.f. and over: 13 stalls (2 per unit) = enough

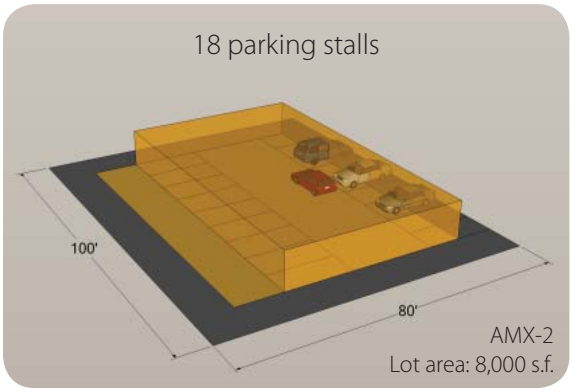


Figure 140: Maximum parking for FAR (Source: Author)

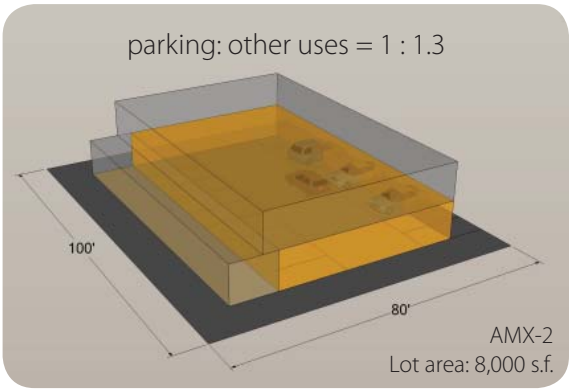


Figure 141: Parking/building ratio (Source: Author)

AMX-3

- Commerce and Business: 25 stalls (1 per 400 s.f.) = not enough
- Food service: 33 stalls (1 per 300 s.f.) = not enough
- Dwellings, multifamily - unit size 600 s.f. or less: 17 stalls (1 per unit) = not enough
- Dwellings, multifamily - unit size 800 s.f. and over: 25 stalls (2 per unit) = not enough

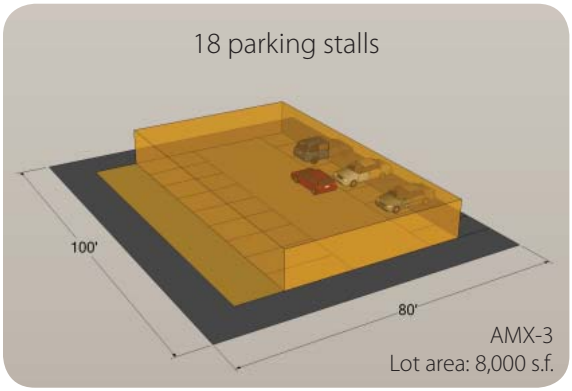


Figure 142: Maximum parking for FAR (Source: Author)

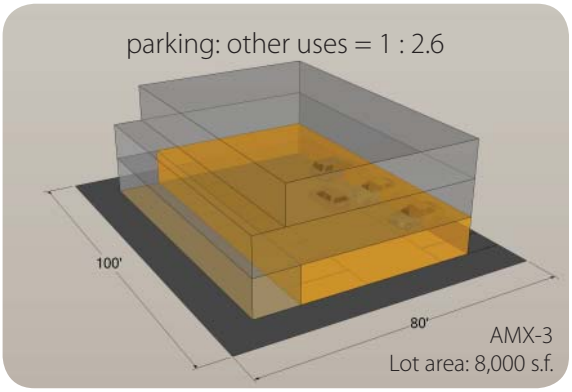


Figure 143: Parking/building ratio (Source: Author)

18 parking stalls do not meet the existing requirement for the density of AMX-3. However, parking structure is not possible for the lot of this size. In order to meet the parking requirement, the density should be decreased to the same density as AMX-2, which is not efficient when the density is required for a new development to prosper. Moreover, the possibility of the building form is extremely limited because of the large area of parking on the ground level.

Lot area: 10,000 to 20,000 s.f. (Example lot area: 15,000 s.f.)

AMX-2

- Commerce and Business: 41 stalls (1 per 400 s.f.) = not enough
- Food service: 54 stalls (1 per 300 s.f.) = not enough
- Dwellings, multifamily - unit size 600 s.f. or less: 27 stalls (1 per unit) = enough
- Dwellings, multifamily - unit size 800 s.f. and over: 41 stalls (2 per unit) = not enough

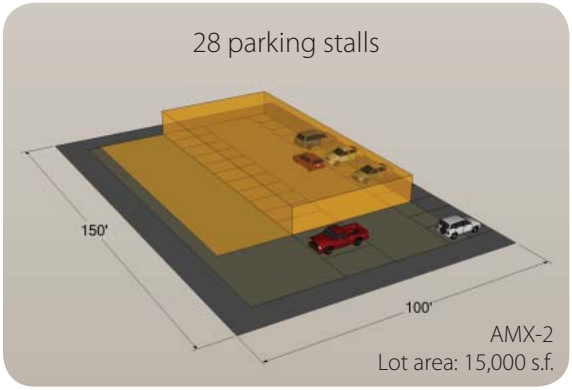


Figure 144: Maximum parking for FAR (Source: Author)

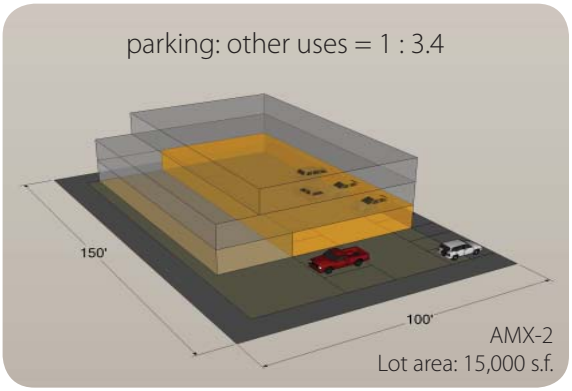


Figure 145: Parking/building ratio (Source: Author)

28 parking stalls do not meet the existing requirement for the density of AMX-2. Parking structure is also not possible for the lot of this size. In order to meet the parking requirement, the density should be decreased by 50%, which is not efficient when the density is required for a new development to prosper. As the number of parking stalls cannot be increased, the existing requirement for the density of AMX-3 also cannot be met.

Lot area: 20,000 to 40,000 s.f. (Example lot area: 30,000 s.f.)

AMX-2

- Commerce and Business: 113 stalls (1 per 400 s.f.) = not enough
- Food service: 151 stalls (1 per 300 s.f.) = not enough
- Dwellings, multifamily - unit size 600 s.f. or less: 75 stalls (1 per unit) = not enough
- Dwellings, multifamily - unit size 800 s.f. and over: 113 stalls (2 per unit) = not enough

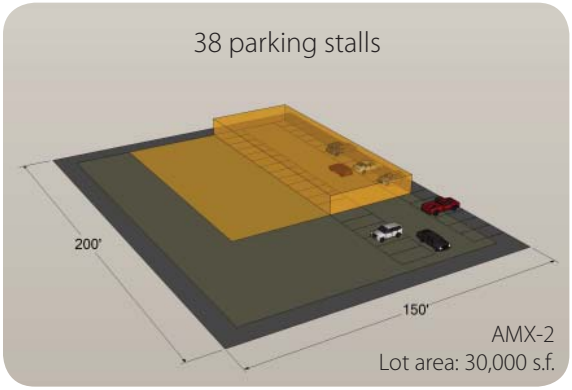


Figure 146: Maximum parking for FAR (Source: Author)

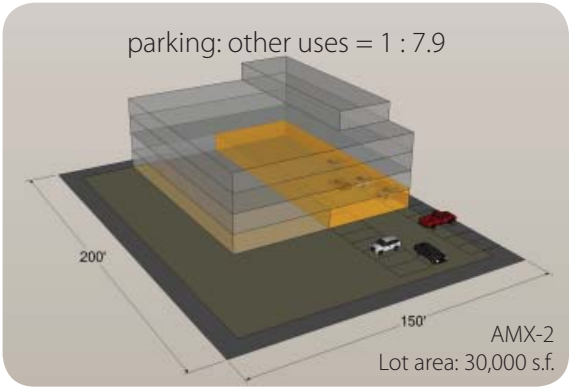


Figure 147: Parking/building ratio (Source: Author)

38 parking stalls do not meet the existing requirement for the density of AMX-2. Parking structure is not possible for this shape of the building area. In order to meet the parking requirement, another possibility could be considered as follows:

- Commerce and Business: 53 stalls (1 per 400 s.f.) = enough
- Food service: 70 stalls (1 per 300 s.f.) = not enough
- Dwellings, multifamily - unit size 600 s.f. or less: 35 stalls (1 per unit) = enough
- Dwellings, multifamily - unit size 800 s.f. and over: 53 stalls (2 per unit) = enough

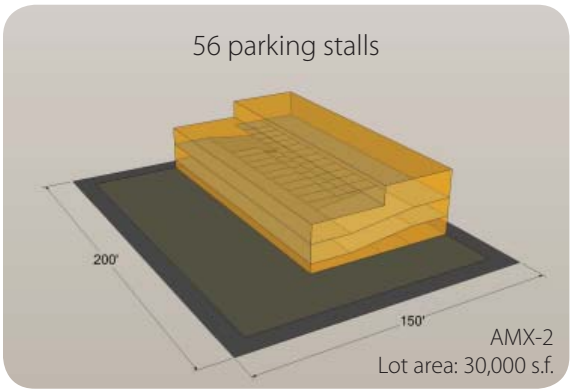


Figure 148: Maximum parking for FAR (Source: Author)

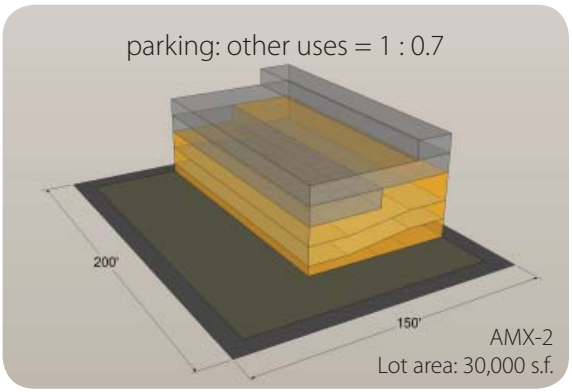


Figure 149: Parking/building ratio (Source: Author)

Although the parking requirements are almost met, the diagrams above show that a parking structure takes up a lot of space. Compared to the former diagrams, the volume is so much larger, but the parking is increased only by 13 stalls.

AMX-3

- Commerce and Business: 75 stalls (1 per 400 s.f.) = enough
- Food service: 100 stalls (1 per 300 s.f.) = not enough
- Dwellings, multifamily - unit size 600 s.f. or less: 50 stalls (1 per unit) = enough
- Dwellings, multifamily - unit size 800 s.f. and over: 75 stalls (2 per unit) = enough

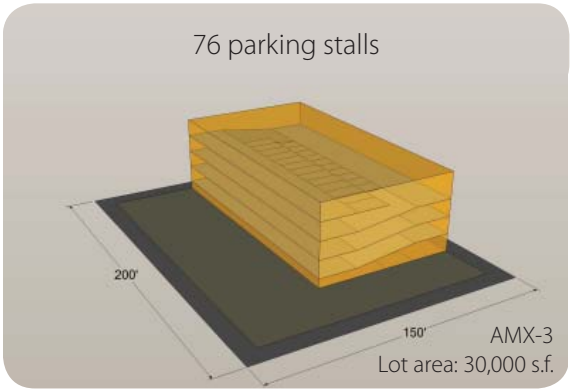


Figure 150: Maximum parking for FAR (Source: Author)

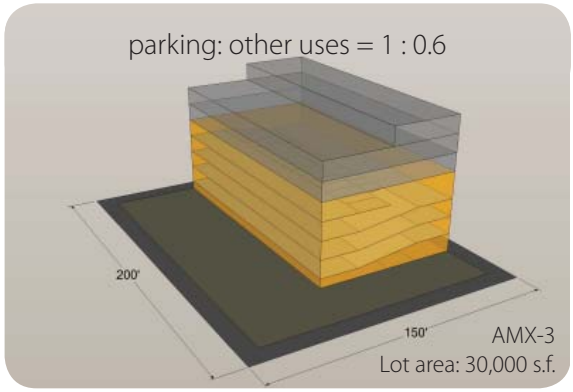


Figure 151: Parking/building ratio (Source: Author)

The parking requirements are almost met for AMX-3 as well. However, the volume of the parking seems to overwhelm the volume of the rest of the building.

Lot area: over 40,000 s.f. (Example lot area: 50,000 s.f.)

AMX-2

- Commerce and Business: 98 stalls (1 per 400 s.f.) = enough
- Food service: 130 stalls (1 per 300 s.f.) = not enough
- Dwellings, multifamily - unit size 600 s.f. or less: 65 stalls (1 per unit) = enough
- Dwellings, multifamily - unit size 800 s.f. and over: 98 stalls (2 per unit) = enough

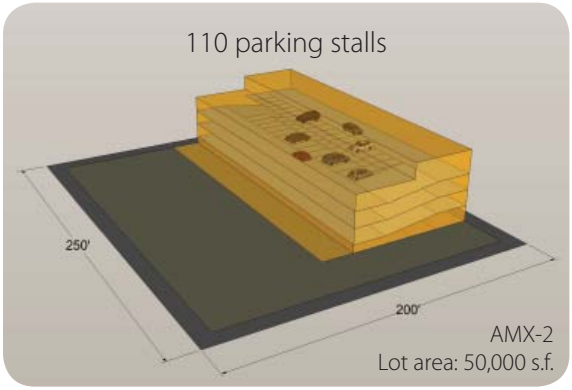


Figure 152: Maximum parking for FAR (Source: Author)

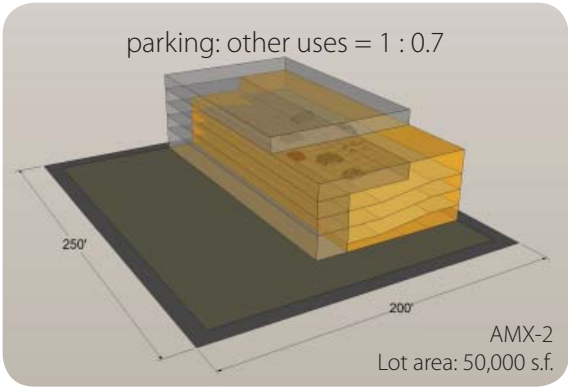


Figure 153: Parking/building ratio (Source: Author)

As parking structure is possible for this lot size, most parking requirements are met. However, the possibility of the building form is extremely limited because of the maximum building area. The example for AMX-3 below shows a similar condition.

AMX-3

- Commerce and Business: 150 stalls (1 per 400 s.f.) = enough
- Food service: 200 stalls (1 per 300 s.f.) = not enough
- Dwellings, multifamily - unit size 600 s.f. or less: 100 stalls (1 per unit) = enough
- Dwellings, multifamily - unit size 800 s.f. and over: 150 stalls (2 per unit) = enough

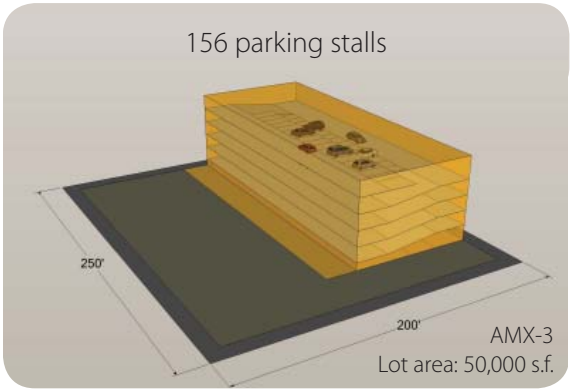


Figure 154: Maximum parking for FAR (Source: Author)

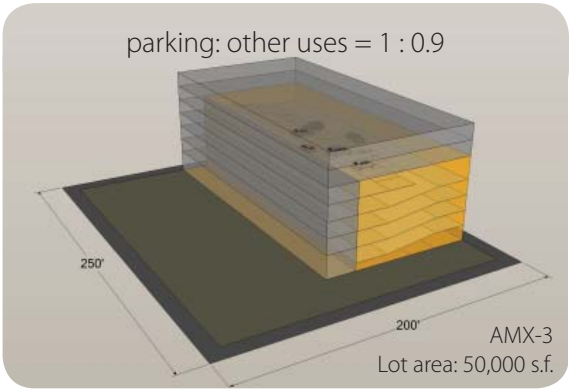


Figure 155: Parking/building ratio (Source: Author)

Constraints of existing parking requirement

According to the analysis above, it seems that the existing parking requirement is not appropriate for a high-density development as:

- Parking takes up a lot of space
- Large volume of parking does not allow flexible building forms
- Density of the uses other than parking (gray blocks) seems to be not dense enough

The building form and the density of the uses other than parking are greatly governed by the parking, as parking takes up a lot of space. The density of the 'non-parking' uses should be denser in order to support the activities in a neighborhood that is transformed into a high-density mixed use neighborhood. Moreover, the existing parking requirement encourages reliance on the automobile and discourages the pedestrian oriented environment.

The constraints above could be resolved by:

- Reducing the parking requirement
- Maximizing the building area within the existing yards = increasing density

Parking requirement could be reduced by the new transit system

As the major means of transportation is the automobile in Honolulu, it is natural that the parking requirement is critical. However, the state is planning to introduce a new transit system. It is a great opportunity for a neighborhood that could be a new central urban area to become a pedestrian oriented neighborhood. As the dependency on the automobile could be reduced by using the transit system and the secondary feeder system from the transit stations, the parking requirement could be also reduced. A new central urban area should be a place where people can go anywhere without using the automobile. The existing common sense that everyone has to have a car should be changed in order to support the high-density mixed use neighborhood that can accommodate the growing population.

Maximizing the building area

As stated in section 2, the existing maximum building area provides an opportunity for open space around the building when the open space is utilized for people to gather and interact such as plazas or pocket parks. However, the open spaces could be turned into factors for unattractive streetscape such as parking lot. Although the open space is utilized as plazas or pocket parks, the density and the flexibility of building forms are extremely limited. In order to increase the density and the flexibility of building forms, the building area should be maximized. Existing yards should be maintained in order to provide adequate width of the sidewalk and the space between buildings. The example below shows how the building could be utilized by maximizing the building area.

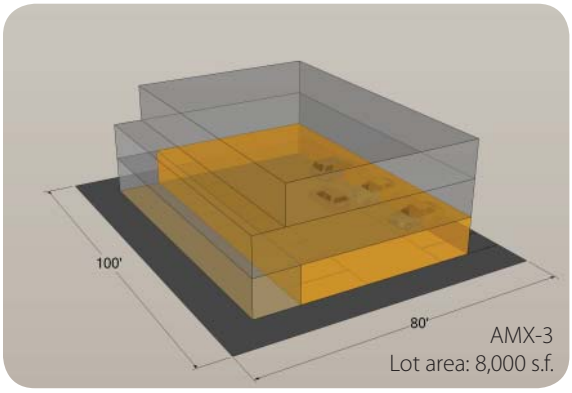


Figure 156: Existing condition (Source: Author)

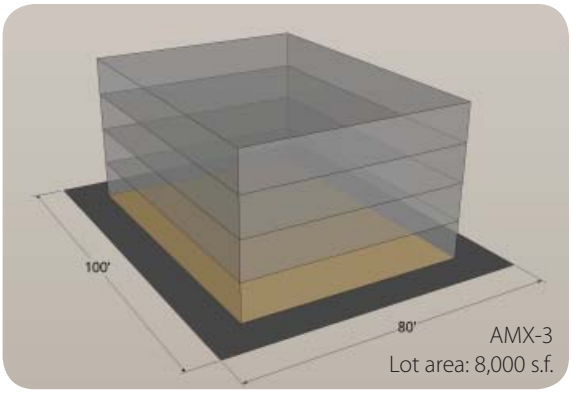


Figure 157: Proposed condition (Source: Author)

Existing condition

- 18 parking stalls
- parking : other uses = 1 : 2.6
- not dense enough
- not flexible

Proposed condition

- 0 parking stalls
- 100% other uses
- increase density of other uses
- allow flexibility
- use shared parking in other buildings

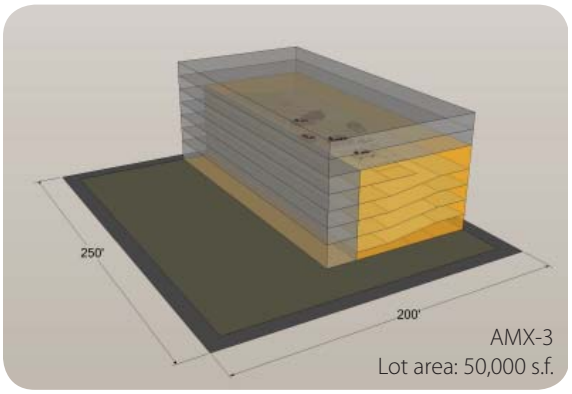


Figure 158: Existing condition (Source: Author)

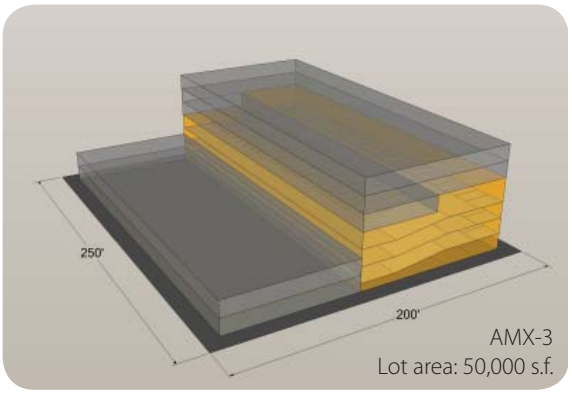


Figure 159: Proposed condition (Source: Author)

Existing condition

- 156 parking stalls
- parking : other uses = 1 : 0.9
- not dense enough
- not flexible

Proposed condition

- 233 parking stalls (77 more stalls)
- parking : other uses = 1 : 1.2 (30% gain)
- increase density of other uses
- allow flexibility
- parking could be shared with other buildings

The problem of the proposed condition above is a lack of open space. In order to achieve the open space, height regulation and setback could be utilized. In fact, the density and the height regulation are closely related. The next section will focus on the height regulation and setback in relation to the density.

4. Height regulation and setback

The maximum height is regulated according to zoning maps. The existing height regulation does not allow flexibility for a new high-density development. It shall be changed according to the open space provided in order to:

- provide more open space
- allow unique facade and building forms
- increase density

The examples below show the possibilities of open space and increased density. When the open space is provided, the density shall be increased twice as much as the volume used for open space. The maximum height shall be changed according to the increased density. This method kills two birds with one stone as:

- It encourages to provide open space
- The more open space, the more density

Example 1: Maximum height = 40 feet

- Maximum building area = 4,800 s.f.
- Open space = 400 s.f.
- Total floor area used for open space provided = 1,600 s.f.
- Actual building area = maximum building area - open space = 4,400 s.f.
- Density could be increased up to 1,600 s.f. x 2 = 3,200 s.f.
- 3,200 s.f. (increased density) < 4,400 s.f. (actual building area) x 1 (1 story)
- Maximum height could be increased by 10 feet (1 story)

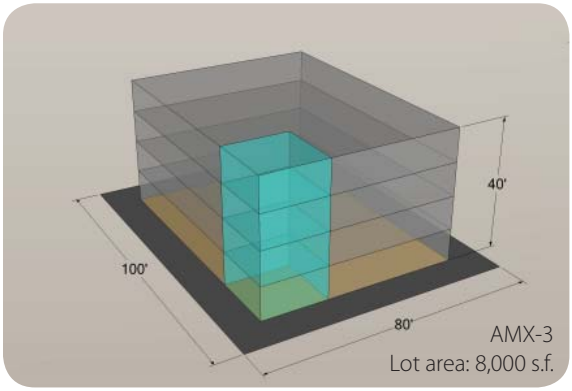


Figure 160: Possible open space (Source: Author)

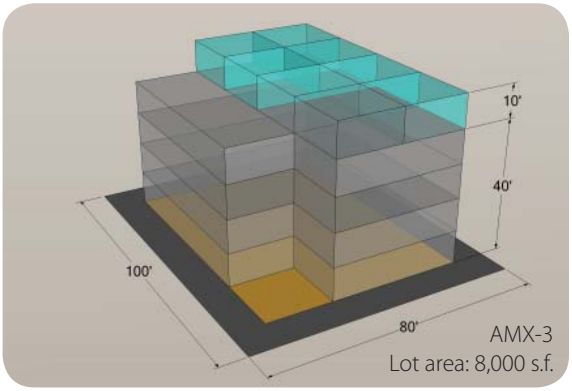


Figure 161: Increased density (Source: Author)

Example 2: Maximum height = 40 feet

- Maximum building area = 4,800 s.f.
- Open space = 1,400 s.f.
- Total floor area used for open space provided = 4,800 s.f.
- Actual building area = maximum building area - open space = 3,400 s.f.
- Density could be increased up to 4,800 s.f. x 2 = 9,600 s.f.
- 9,600 s.f. (increased density) > 3,400 s.f. (actual building area) x 2 (2 stories)
- Maximum height could be increased by 30 feet (3 stories)

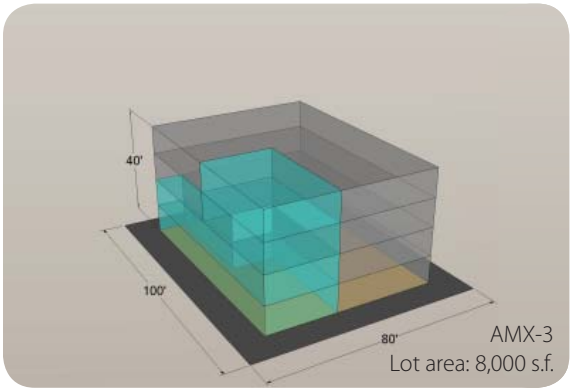


Figure 162: Possible open space (Source: Author)

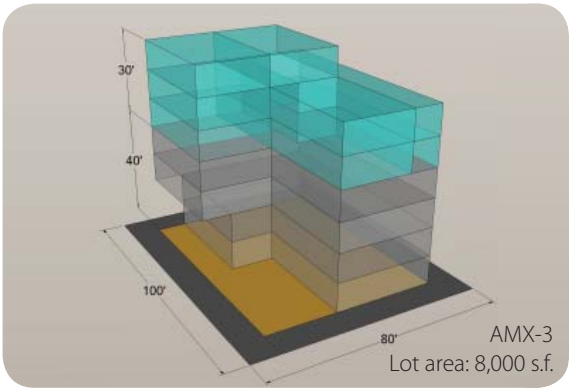


Figure 163: Increased density (Source: Author)

Example 3: Maximum height = 60 feet

- Maximum building area = 41,400 s.f.
- Open space = 5,750 s.f.
- Total floor area used for open space provided = 11,500 s.f.
- Actual building area = maximum building area - open space = 35,650 s.f.
- Density could be increased up to 11,500 s.f. x 2 = 23,000 s.f.
- 23,000 s.f. (increased density) < 35,650 s.f. (actual building area) x 1 (1 story)
- Maximum height could be increased by 10 feet (1 story)

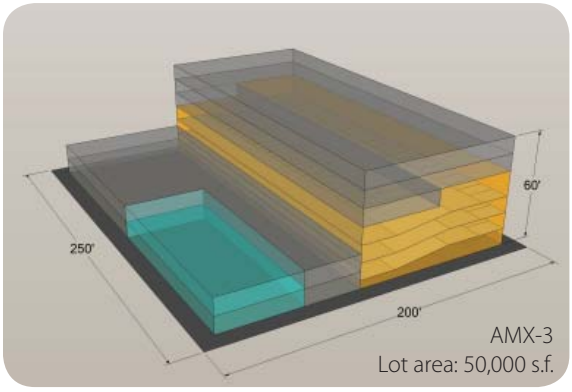


Figure 164: Possible open space (Source: Author)

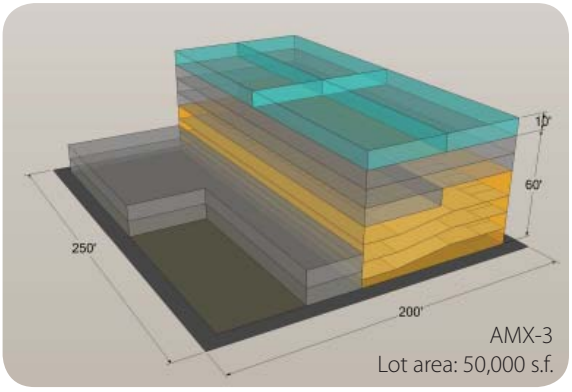


Figure 165: Increased density (Source: Author)

Example 4: Maximum height = 60 feet

- Maximum building area = 41,400 s.f.
- Open space = 11,500 s.f.
- Total floor area used for open space provided = 23,000 s.f.
- Actual building area = maximum building area - open space = 29,900 s.f.
- Density could be increased up to 23,000 s.f. x 2 = 46,000 s.f.
- 46,000 s.f. (increased density) > 29,000 s.f. (actual building area) x 1 (1 story)
- Maximum height could be increased by 20 feet (2 stories)

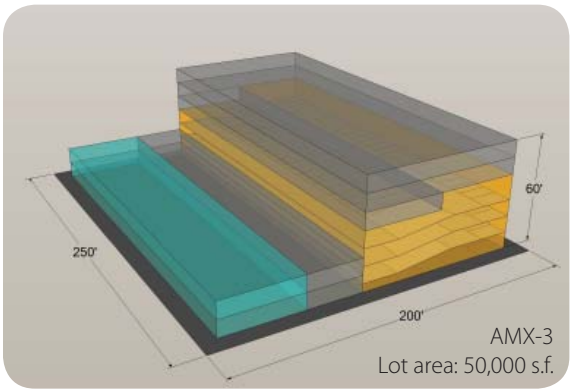


Figure 166: Possible open space (Source: Author)

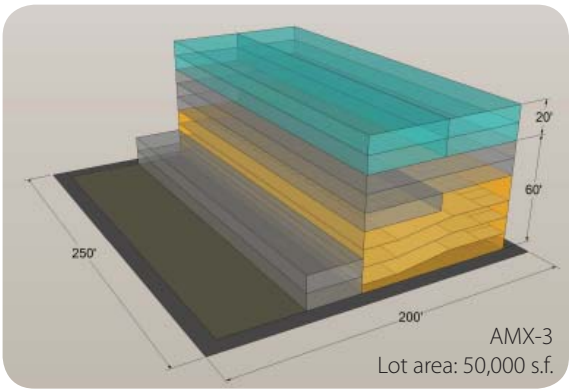


Figure 167: Increased density (Source: Author)

Height setback

Height setback of the building facade facing a main street shall be greater in order to:

- reduce the pressure of the building volume on the pedestrian friendly sidewalk
- achieve privacy for the residents above
- enhance more natural lighting
- provide roof top gardens

The diagrams below show existing height setback.

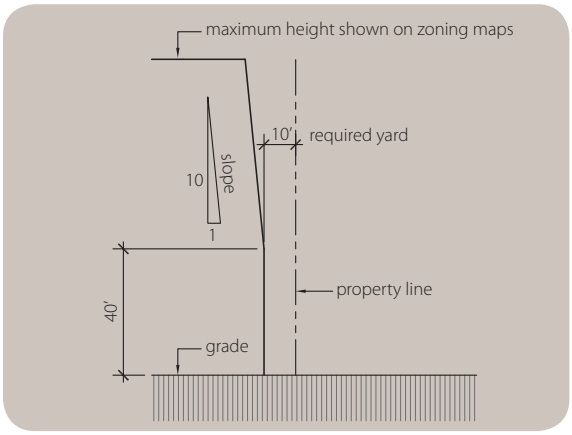


Figure 168: Existing height setback for AMX (Source: LUO)

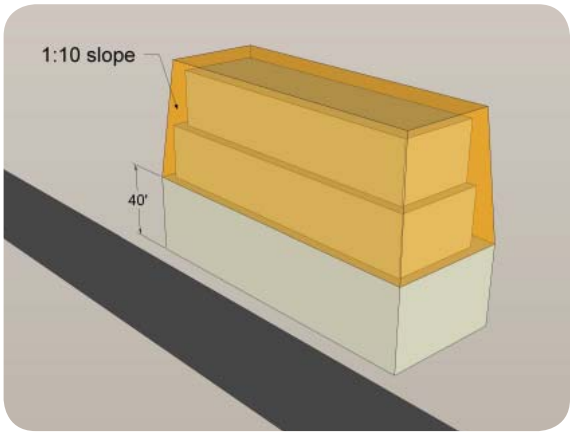


Figure 169: Example of building form (Source: Author)

The existing height setback does not allow to reduce the pressure, achieve privacy, enhance lighting, or provide roof top gardens. Maximum height shall be increased according to the height setback provided. When the certain amount density is used to provide height setback, the same amount of density shall be added. The setback should occur along the main street and provide at least 40% of the top surface area of the largest building volume.

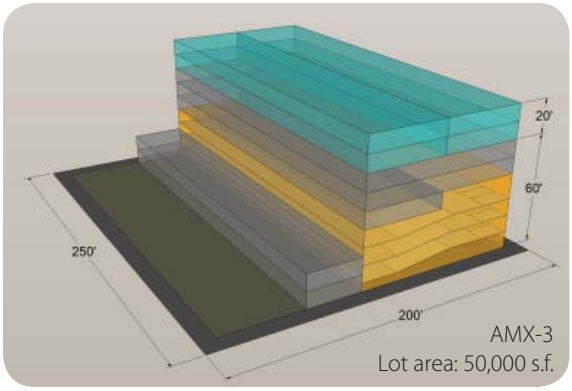


Figure 170: Without height setback (Source: Author)

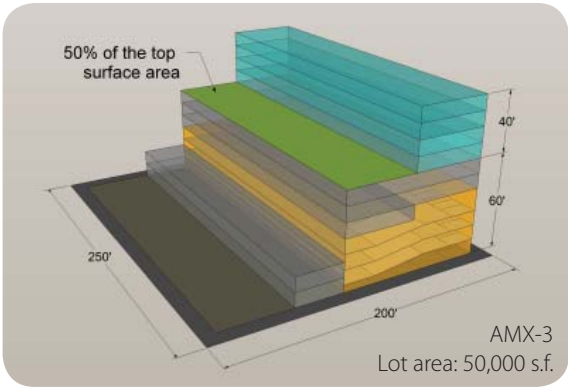


Figure 171: Proposed height setback (Source: Author)

Chapter 6: Implementation Strategy - Design Guideline

Design Guideline

The design guideline is proposed as a methodology to create places where identity can evolve in Makiki as well as any neighborhood in Honolulu. The guideline is developed based on the following:

- Demographics - chapter 2
- Site analysis - chapter 2
- Analysis of mixed use - chapter 3
- Three important factors (culture, public space and activities) - chapter 4
- Five basic elements (diversity, experience, appearance, comfort, and flexibility) - chapter 4

The design guideline addresses aesthetic issues that the neighborhood face in planning mixed use development. The purpose of the design guideline is to provide ideas, stimulate thinking and promote good design for a neighborhood. It is intended to:

- improve the quality of functional and physical alterations to the neighborhood
- improve the quality of the pedestrian experience
- create an opportunity for evolving identity (not applied identity)
- promote community awareness of the physical environment
- encourage flexible and individual creativity rather than homogeneous uniformity

1. Introducing mixed use

Introducing mixed use is a primary strategy that provides an infrastructure to form an identity in a neighborhood. As I discussed in chapter 3, there are different types of mixed use such as:

- Vertical mixed use
- Town center planned mixed use
- Adaptive mixed use
- Corridor high-density residential mixed use
- Neighborhood mixed use

As each neighborhood is different in size, density, need, or people, it is recommended to introduce a suitable type of mixed use for the neighborhood.

Figure 172: Different types of mixed use (Source: Author)

Different uses can be placed in the same development site, the same street block or in close vicinity, thus the various uses may create convenience and interaction and share infrastructure. The different uses inculde:

- Residential
- Retail
- Office
- Entertainment
- Community services

Figure 173: Different uses (Source: Web - Flickr)

Functional and physical integration of uses is important in mixed-use developments. It is a key to leveraging the advantages of a shared location and customer base. In order to integrate uses, all project components need to be interconnected by an elaborated pedestrian network. It is also important to locate key components that have a high demand around activity nodes.

2. Introducing secondary transit feeder system

In order to bring people to a neighborhood, it is encouraged to introduce a secondary transit feeder system from a major transit station or places that accommodate a number of people such as a shopping center or university. It is an important connection between the neighborhood and other central areas in order to avoid isolation and to bring more people to the neighborhood to support the business and activities in the mixed use development.

Secondary feeder systems include:

- Streetcar
- Trolley
- Bus

Figure 174: Secondary feeder system (Source: Web - Flickr)

The secondary feeder system allows residents within the neighborhood to walk to a close destination without using their cars. It contributes to the reduction of reliance on the automobile and fosters a pedestrian friendly community.

The major means of transportation to work in Honolulu is the automobile. If the secondary feeder system is utilized efficiently, residents can use it to go to work. When residents can go to anywhere without their cars, the needs of the automobile could be drastically reduced, thus the parking requirements also could be reduced.

The secondary feeder system shall run every 5 minutes in order to achieve convenience and stops shall be located every 2 blocks within a walking distance. It is also encouraged to have a dedicated lane for secondary feeder systems in order for them to run efficiently.

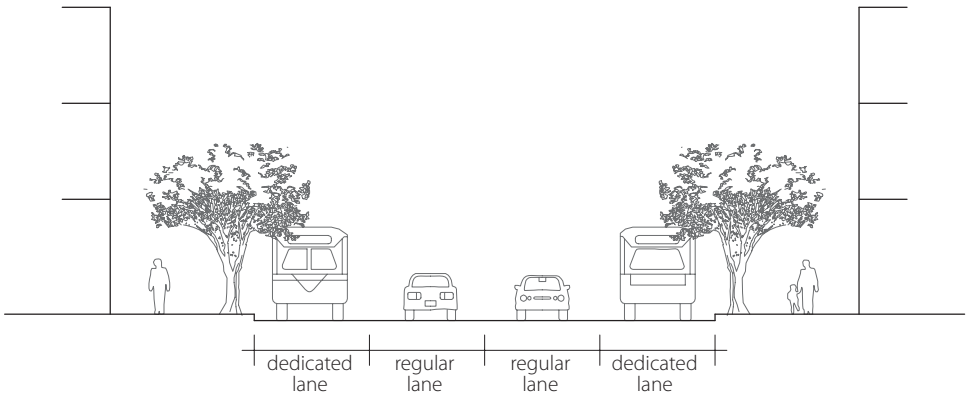


Figure 175: Dedicated lanes for secondary feeder systems (Source: Author)

3. Parcel consolidation

Building forms are often governed by the parcel size and configuration and zoning. Many buildings in a neighborhood in Honolulu, including Makiki, are developed on the street's original narrow parcel configurations and zoning. These narrow lots have caused their structures to be oriented sideways, often yielding a blank wall to the street and giving their openings that face away from the sidewalk and street in front of their homes. Parcel consolidation enable buildings to have wider facades and openings that create a pedestrian friendly environment.

Figure 176: Buildings oriented sideways caused by narrow parcels (Source: Author)

Figure 177: Wider facade and openings achieved by parcel consolidation (Source: Author)

Parcel consolidation should be encouraged, as it provides:

- opportunity of maximum utilization and good planning for a mixed use development
- wider facades and openings to create a pedestrian friendly environment
- higher profit return on the property
- alternative building configurations, mixing of building types, and spatial use
- opportunity to have public spaces

Parcel consolidation would encourage alternative building configurations, the mixing of building types, and spatial use that are significantly important in creating variety and vitality in a walkable neighborhood. Buildings could be organized parallel to the street, or in layered configurations, or any mixture of layouts instead of being organized all perpendicular to the street block after block in narrow parcels. It also encourages to have public space at varying scales such as pocket parks, plazas, and courtyards. Parcel consolidation may even lend itself favorably to the inclusion of service alleyways, which could be solutions for internal parking system or better waste management so that unsightly trash is no longer piled up along the street.

In terms of consolidating ownership interests, the sense of community responsibility would be enhanced, because there would be many owners with a vested interest in maintaining linked properties. There could be savings in shared common areas and service yard allotments could be bigger, which benefits everyone. The parking driveway requirements could be also shared by as many as two, three or four times the number of residents. Instead of an individual driveway for each and every building and parcel, the common driveway could service several buildings at once.

However, parcel consolidation is extremely difficult in reality, as each narrow parcel is typically owned by different owners. There are some ways to make it possible. One is that a developer buys multiple adjoining parcels. Another is to create a new regulation that different owners of adjoining parcels can form a partnership under certain conditions such as providing certain amount of open space. There are some attractive tax incentives which would encourage separate owners to form joint venture partnerships which would ultimately translate into parcel consolidation and the subsequent re-design of adjacent buildings and properties.

When parcel consolidation is not possible

A building facade literally means the "building's face", thus a street is actually an encounter with many different faces of varying shapes, sizes, colors and expressions. It is not a pleasant experience to walk down a street and encounter only the back side or blank side of buildings. Therefore, even when parcel consolidation is not possible, it is highly recommended to provide openings or storefronts facing the main street to avoid yielding blank walls to the street that discourage a pedestrian friendly streetscape.

Figure 178: Providing storefronts sideways yielding blank walls to the street (Source: Author)

Figure 179: Providing storefront facing the main street (Source: Author)

4. Parking

The availability and cost of parking are important factors for people when they make choices about where to live, work, shop, or conduct business. The challenge is to :

- provide enough parking to meet mobility and economic needs without providing too much
- encourage people to use other ways of travel
- minimize the impacts of parking on the neighborhood character

Amount and Location

The goal for a neighborhood is to have the right amount of parking. This can be very difficult for a community to define because different people have different needs. Residents need a place to park their cars close to their homes. Businesses need parking spaces for their employees and customers. Businesses also need inexpensive and accessible parking for customers. Employees and customers both want to park as close as possible to their destinations. Residents don't want strangers parking on their streets, especially when their own parking options are limited. [1]

The amount and location of parking should be appropriate for the activities in the neighborhood without detracting from neighborhood character. Parking can be distributed in an area to encourage people to walk, use transit, and increase their interactions. It is also important to place all off-street parking behind the primary uses away from streets or behind landscaped open space in order to enhance the pedestrian friendly environment.

Figure 180: Place parking behind the primary uses (Source: Author)

Figure 181: Place parking behind landscaped open space (Source: Author)

1. Seattle Department of Transportation: *The Parking Tool, Seattle, WA, 1996*

On-street parking

On-street parking is a key factor in promoting businesses in a neighborhood. As a type of shared parking, on-street parking is an efficient means for allowing multiple users to access multiple destinations. The advantages of on-street parking are as follows:

- utilizes less land per space than off-street parking
- provides easy access to businesses located on the streets
- creates a buffer between moving traffic and pedestrians
- reduces the level of traffic noise
- serves as a traffic calming device (e.g. slowing vehicles or reducing accidents)

However, there are also disadvantages such as:

- creates visual obstruction for both pedestrians and moving vehicles
- competes with other uses of roadways (e.g. additional lanes for traffic flow or wider side walks)
- increases congestion on roadways when drivers search for open spaces
- attracts vehicles that generates more traffic

The advantages of on-street parking could surpass the disadvantages when it is located in an appropriate places and utilized properly.

Recommendation

- On-street parking should be provided on side streets
- Street parking spaces should be shaded by trees at intervals of every 2 to 3 parking spaces

Figure 182: On-street parking on side streets (Source: Author)

Off-street parking

According to the City and County of Honolulu Land Use Ordinance, off-street parking is intended to minimize street congestion and traffic hazards, and to provide safe and convenient access to residences, businesses, and public services, but not intended to satisfy maximum parking demand. However, off-street parking requirements seem to emphasize quantity over quality and overwhelm the physical landscape with an excessive supply of unattractive parking. However, as stated in Chapter 5, the required parking should be reduced. It is possible when the secondary transit feeder system is utilized and the residents' dependency on the automobile is reduced. Moreover, reduction of the dependency on the automobile creates a pedestrian oriented environment.

The pedestrian oriented environment is fostered when:

- All off-street parking is placed behind the primary uses away from streets
- Parking access is placed on side streets
- Additional parking structures are located at each end of active main street
- Additional parking structures are placed behind the other uses or landscaped open space

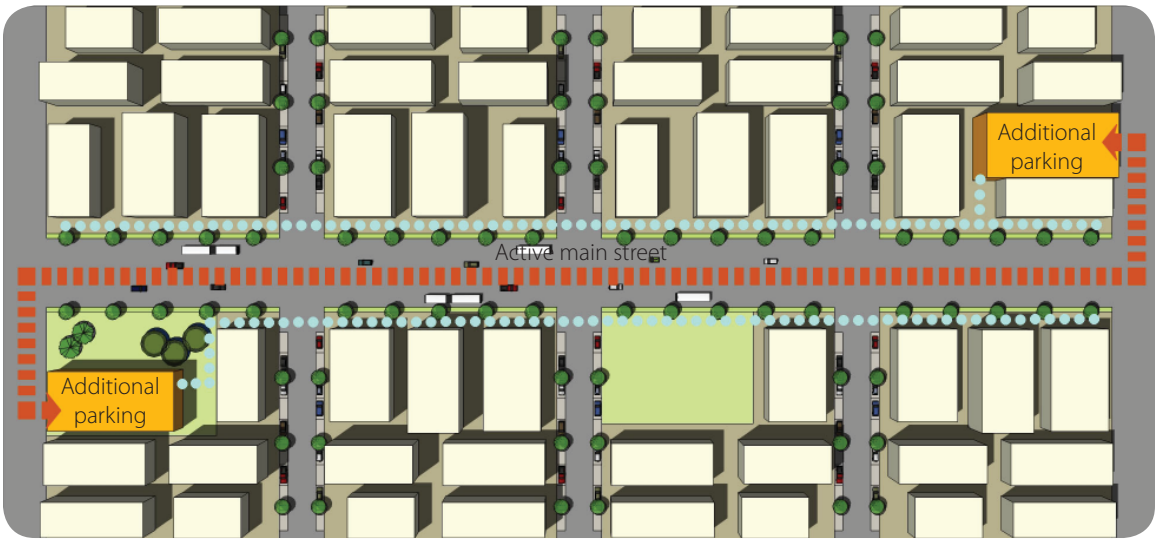


Figure 183: Off-street parking and circulations (Source: Author)

5. Cultural Diversity

The neighborhood shall have a cultural diversity and be a place where people from various cultural backgrounds can live, work, visit, and enjoy their everyday life.

Figure 184: Cultural diversity (Source: Author and Web - Flickr)

Cultural events and street markets

The neighborhood shall provide opportunities for various cultural events and street markets. Cultural events allow people to interact and create an vibrant community. A farmers market provides a variety of goods and foods from different cultures. These are important for the residents and visitors to experience a variety of culture in the neighborhood.

Bon Dance - Japanese

Dragon Dance - Chinese

Hula - Hawaiian

Fan Dance - Korean

Pumpkin Carving - Western

Mochi Pounding - Japanese

Figure 185: Cultural events (Source: Web - Flickr)


Fort Pierce, FL


Des Moines, IA


Little Rock, AR


London, England


City Park, UT


Honolulu, HI

Figure 186: Farmers market (Source: Web - Flickr)

Public space that fosters cultural diversity

Cultural events and street markets provide a diversity of cultural experience such as art, music, history, food and goods. In order to have various cultural events and activities, the neighborhood shall provide different types of public space such as:

- Park
- Plaza
- Courtyard
- Wide sidewalk


Figure 187: Public space (Source: Author and Web - Flickr)

It is important to start by truly understanding how people will use a place and what activities will draw them there. Design cannot be the starting point for creating a great public space. Within any successful public space, there should be several dynamic destinations that attract different kinds of people. These destinations should offer many things to do, such as gathering, socializing, eating, reading, playing games, interacting with art, and so on. Creating a great public space requires an articulated vision of the community for these activities and destinations. Therefore, it is important to pay attention to the cultural background of the neighborhood. This first step of place-making process for uses, activities, and destinations leads to detail design that will succeed.

Parks have an ability to accommodate many different types of uses and people. They could be the places where you might meet a friend for lunch, stage an outdoor concert for a large number of people, or just relax and read a book. Parks can act as a buffer between residential area and high-dense mixed use area. Different types of public space provide various kind of activity nodes and pedestrian networks between those nodes.

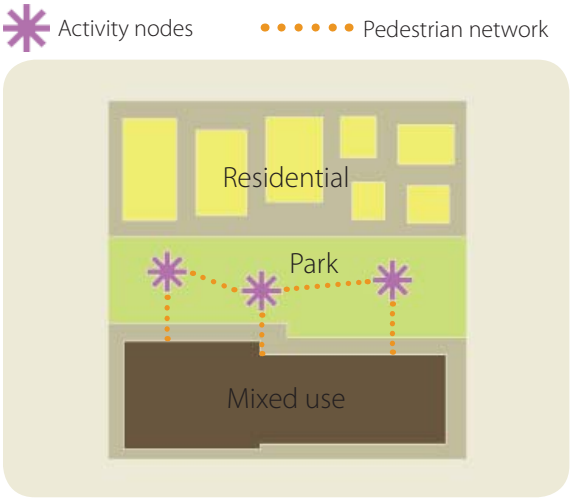


Figure 188: Park (Source: Author)

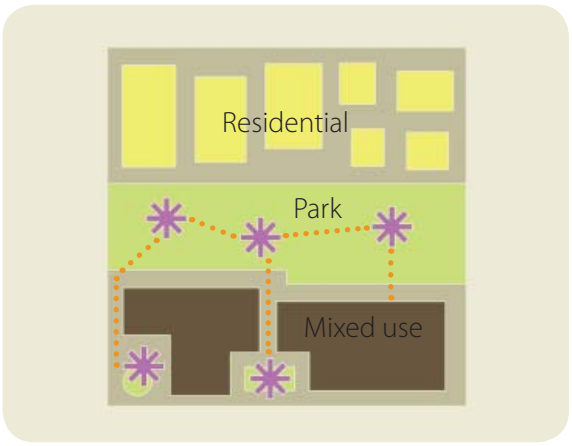


Figure 189: Plaza (Source: Author)

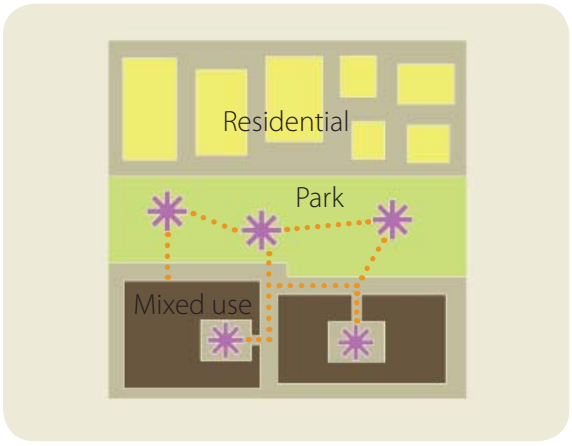


Figure 190: Courtyard (Source: Author)

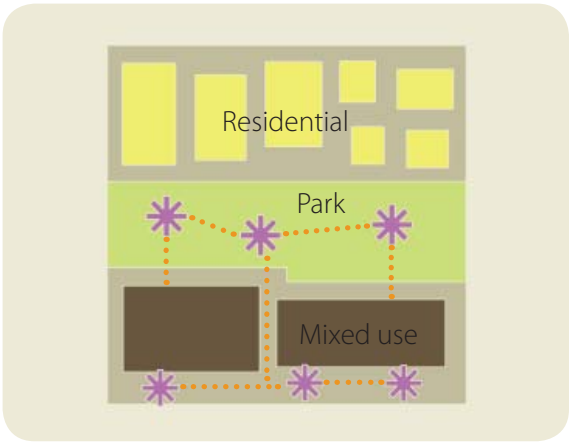


Figure 191: Wide sidewalk (Source: Author)

6. Diversity of architectural styles and building types

The neighborhood shall have a diversity of architectural styles and building types in order to avoid monotonous atmosphere. The diversity allows a neighborhood to have a vibrant atmosphere and allows residents and visitors to have an enjoyable walking experience. However, it is also important to keep a certain level of coherence in order to avoid the eclectic appearance.

Figure 192: A diversity of architectural styles and building types (Source: Author and Web - Flickr)

Diversity of architectural styles

In order to create a neighborhood as a new central urban area, it is encouraged to introduce a modern style that is incorporated with the sense of cultural diversity. It should be encouraged to reflect the local, micro-cultural conditions in the neighborhood. However, designers and developers of new buildings and developments should not reference the specific cultural elements, as the cultural distribution may change overtime. For example, it is not effective to create Japanese style houses just because the dominant cultural background in a neighborhood is Japanese. Trends change. It is important to design buildings that are flexible and timeless.

It is extremely difficult to control the architectural style and design, as buildings are designed by different designers and developers and it is hard to define what is good design and what is not. The awareness of good design must begin with the designers, clients, owners, and developers. It is important to get them aware of what kind of design language is possible. The best way would be to find one developer and one good designer, and create one or two really noticeable buildings in the area. This would set a precedent for the area, and others would follow the example. There may be a lot of details such as colors, materials, textures, or shapes that will support the big idea, and they all work together, in synergy, to create a heightened awareness and desire for good design.

Diversity of building types

Diversity in building type should include mixed uses within the different building types. For example, the combination of residential and retail uses within the same building should be encouraged. The diversity of building types includes:

- Historical buildings
- Single family houses
- Low-rise buildings
- Mid-rise buildings
- High-rise buildings

Figure 193: Diversity of building types (Source: Author and Web - Flickr)

Historical buildings shall be preserved for residents and visitors to experience the historical and cultural richness of a neighborhood. They provide educational opportunity for residents and visitors to discover the culture and history in the neighborhood.

7. Landscape

Landscape plays an important role in order to create a pleasant environment in a neighborhood. Trees, shrubs and groundcovers are vital elements in the fabric of a neighborhood, as they:

- create connection between people and nature
- foster cultural awareness
- soften hard urban surfaces
- provide a physical buffer between the pedestrian and vehicular traffic

The urban landscape can be treated in a geometric or a soft, organic manner. Plant materials can be used formally to create a rigid and artificial design or casually to create a curvilinear and natural design. Either design strategy may be introduced in order to provide a pleasant neighborhood's urban experience and its sense of place.

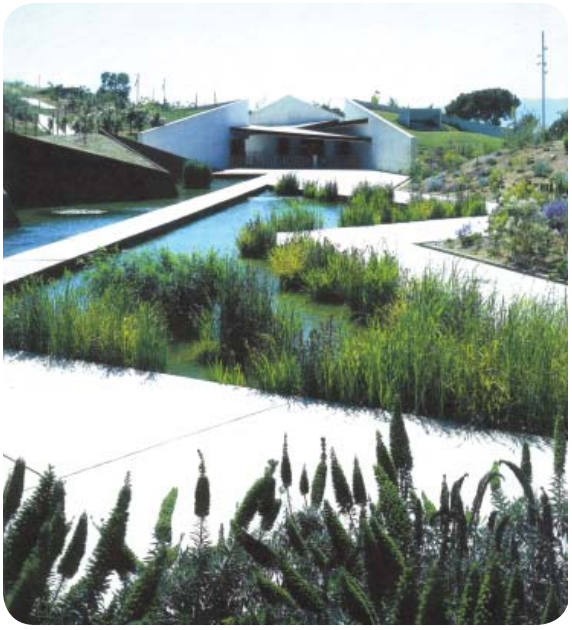


Figure 194: Rigid and artificial landscape design
(Source: Book - Contemporary Landscape)

Figure 195: Curvilinear and natural landscape design
(Source: WKM Landscape Architects - Image library)

Street trees

Street trees are important for a neighborhood as they create a great value to people living, working, shopping, sharing, and walking in and through urban places. They provide so many benefits that they should always be considered as a default street making feature in the neighborhood. The benefits of the street trees are as follows:

- enrich the streetscape
- provide pleasant walking experience
- provide spatial definition
- provide a shade on the sidewalks for a pedestrian friendly environment
- visually soften the sharp edges of urban architecture
- provide sustainable environment (absorb pollutants + lower air temperature)

Figure 196: Street without street trees (Source: Author)

Figure 197: Street with street trees (Source: Author)

It is important to consider varying street tree types based on their appearance, sun/shadow exposure, and the scale of the street. Trees that are suitable for street trees in Hawaii are:

Monkeypod

Shower Tree

Royal Poinciana

Hong Kong Orchid

Figure 198: Street trees (Source: WKM Landscape Architects - Image library)

Monkeypods are large canopy trees which provide a lot of shading and they are suitable for a wide street. They provide a great visual impact on a street. However, when they are used for a narrow street or planted with small spacing, the street may get gloomy. Shower Trees and Royal Poincianas are medium flowering trees which provide moderate shading. They are suitable for a wide to normal street and they provide a pleasant walking experience because of their beautiful flowers. Hong Kong Orchids are small flowering trees and they are often used for a residential street. They also provide beautiful flowers that make a street attractive.

Ornamental plants

Ornamental plants are important to create a sense of place. They provide visual comfort as well as spatial definition. Ornamental features include flowers, leaves, fruits, and fragrance. There are a number of beautiful and vivid plants in Hawaii because of the tropical climate such as:


Coconut Palm


Hala


Breadfruit


Travellers Tree


Ohia


Puakenikeni


Singapore Plumeria


Pink Plumeria


Red Ginger


Shell Ginger


Tiare Gardenia


Spider Lily


Native White Hibiscus


Hula Girl Hibiscus


Yellow Heliconia


Red Heliconia

Figure 199: Ornamental plants (Source: WKM Landscape Architects - Image library)

These ornamental plants also cultivate the cultural awareness. Different types of plants can be used for different purposes or different theme gardens in public spaces in order to provide visitors with tangible examples of endemic, indigenous and Polynesian introduced plants. A good example of this is The Royal Grove at Royal Hawaiian Shopping Center in Waikiki. It provides educational program for the visitors to discover Hawaiian culture and natural history.

Figure 200: Landscape Plan of The Royal Grove at Hawaiian Shopping Center (Source: WKM Landscape Architects)

Figure 201: The Royal Grove at Hawaiian Shopping Center (Source: Author)

Groundcovers

Groundcovers are low-growing plants that spread quickly to form a dense cover. They add beauty to the landscape and, at the same time, help prevent soil erosion. Groundcovers can be used for many purposes, as they:

- provide layers and depth to the landscape design in addition to trees and shrubs
- change the spatial definition of the streetscape
- provide privacy for outdoor dining areas
- act as a buffer for pedestrians along high-volume traffic ways
- restrict pedestrians from crossing areas where the original intention was not for crossing

Figure 202: Groundcovers acting as a buffer (Source: Author)

Figure 203: Groundcovers providing privacy (Source: Author)

Grass is the best known groundcover, but grass is not always suitable for all locations. Grass is often used for relatively large areas where people would gather for physical activities or just relaxing such as parks or multi purpose outdoor area. Other groundcovers should be used for places for different purposes such as spatial definition, providing privacy, or a buffer. The groundcovers other than grass that are often used in Hawaii are:

Naupaka

Pohinahina

Laua'e Fern

Kupukupu Fern

Figure 204: Groundcovers (Source: WKM Landscape Architects - Image library)

8. Storefronts

In order to attract people, a neighborhood shall have a variety of amenities. People look for visual complexity in their surrounding environment and storefronts play a great role to make people attached to the places either physically or mentally.

Good design makes mixed use corridors stronger

The physical design of a neighborhood mixed use area contributes greatly to the overall image of the community. Each storefront shall have its own unique cultural qualities to attract residents, customers, and visitors. The distinctive characteristics and identity of buildings make commercial corridors of the mixed use area valuable and often one of the most interesting and satisfying aspects of the street.

On a commercial corridor, buildings built in the 1970's may exist next to those built in recent years. Some commercial structures started as residences and the first floors were converted to shops later on. Other commercial structures started as mixed use buildings. Old building features from one period should be reconfigured to that of another in order to keep up with architectural trend. If the appearance shows good quality and is pleasing in proportions, composition and details, then the facade is valuable visual resource for the corridor.

Buildings that are too old and have no potential for renovation should be demolished to build new structures as they no longer act as a valuable resource for the corridor. It is a great opportunity to create new buildings with attractive storefronts that make the corridor vibrant and pleasant place for residents, customers, and visitors.

Thoughtful design and improvements reinforce the positive identity of a community's mixed use core and create a sense of place that is distinct to the neighborhood.

Figure 205: Dead commercial corridor (Source: Author)

Figure 206: Great commercial corridor (Source: Author)

Entrance

The entrance is the most important feature of the storefront, as customers make their first choices whether they enter the commercial space or not. Therefore, storefront should provide entrances obvious and welcoming to the customers. It is important to provide the condition for the customers to see what is going on inside and make them want to enter the store.

Recommended

- Use doors that contain a lot of glass
- Use the design that rouses customers' interest
- Use materials and shape that are compatible with overall facade
- Place products in a pleasant manner near the entrance to attract customers

Figure 207: Welcoming entrance (Source: Author)

Not recommended

- Use opaque doors that provide unsafe and unwelcoming feeling
- Storing merchandise behind one door of a double door entrance
- Provide no information about the store
- Use unpleasant security grilles

Figure 208: Unwelcoming entrance (Source: Author)

Windows and display

Windows play an important role for the store, as they provide opportunities to display their products and attract customers. A display should draw attention to the products or services within the store.

Recommended

- Use large windows to provide the maximum amount of visibility
- Use clear glass for easy viewing into the store
- Keep the glass clean
- Use the full extent of the window to display products
- Make the display exciting, fun, and unique

Figure 209: Attractive windows and display (Source: Author and Web - Flickr)

Not Recommended

- Provide blank walls instead of windows
- Use tinted, opaque or smoked glass
- Cover windows with too much signage
- Attach paper signs on windows
- Clutter window displays with too much merchandise
- Use window display as storage
- Keep display windows empty

Figure 210: Unattractive windows and display (Source: Author)

Lighting

Appropriate use of lighting keeps the commercial corridor vibrant and inviting, and provides a sense of safety of the street.

Recommended

- Use lighting to draw attention to window displays, sign, and building's architectural details
- Use exterior fixtures that are compatible with the overall design
- Keep window display well lit, even after business hours
- Direct lighting on the display

Figure 211: Attractive lighting (Source: Web- Flickr)

Not Recommended

- Use flashing or moving lights that are distracting and garish
- Use lighting that is too bright for the surroundings
- Use lighting fixtures that conflict with the architectural style and character of the facade
- Over use of color lights

Figure 212: Distracting lighting (Source: Web- Flickr)

Signage and colors

Signage and colors are important tools to send the message and information of a store and add visual interest to the streetscape experience.

Recommended

- Use artwork, icons, logos and simple messages
- Use accent colors for a focal point
- Use distinctive lettering style that represent the store
- Use type fonts and colors that are legible
- Incorporate illumination of a sign at night as an integral part of the design

Figure 213: Attractive signage and colors (Source: Web- Flickr)

Not Recommended

- Use many signs that are confusing to read
- Use long and complicated messages
- Attach paper signs on the windows

Figure 214: Confusing and complicated signage (Source: Web- Flickr)

Overhangs

Overhangs provide practical purpose such as protecting pedestrians from sun or rain, shading of outdoor dining area or outdoor display area, and enhance a store's appearance.

Recommended

- Use overhangs that have a simple design
- Use weather resistant materials
- Use overhangs to create pleasant shaded space in front of a store
- Use overhangs that are appropriately scaled to the building

Figure 215: Attractive overhangs (Source: Web- Flickr)

Not Recommended

- Use overhangs that provide too much shading to make the storefront dark
- Keep using overhangs that are damaged or outdated
- Use low-quality materials
- Use design and colors that conflict with the overall facade
- Use too many different colors within one facade

Figure 216: Unattractive overhangs (Source: Web- Flickr)

Unique facades

Unique facades provide the character and attitude of a store to the streetscape. They have a potential to give a stronger impact on the streetscape. Unique facades not only achieve a desired visual effect, but also stimulate people's expectation of what the new experience can be. Some unique facades may break the rules above in a good way and rouse customers' interest such as:

- Small openings that make customers want to look inside
- No signage or information provided = facade tells everything
- Tinted glass as a part of the overall design

However, this types of storefront should not be placed next to each other, as they compete with each other and provide chaotic atmosphere to the streetscape. They should be used as iconic features and placed at the activity nodes in the neighborhood.

Figure 217: Unique facades (Source: Web- Flickr)

Chapter 7: Applied design scenario in Makiki

Makiki as a possible scenario

The implementation strategy in chapter 5 and 6 can be applied to any neighborhood in Honolulu. The next step is to redesign Makiki as a possible scenario based on the implementation strategy to prove how it works. The new design is not a fixed master plan, but one of the possible design solutions. The implementation strategy should be translated and applied differently depending on each characteristic of a neighborhood.

1. Introducing mixed use : Corridor high-density residential mixed use

Introducing mixed use is a primary strategy that provides an infrastructure to form an identity in a neighborhood. Corridor high density residential mixed use is suitable for Makiki because Wilder Avenue is a major corridor in Makiki and its high traffic volume provides a great potential for redevelopment.

The following can be achieved by introducing this type of mixed use in Makiki:

- Convenient shopping, housing, and office space for the residents
- Convenient access to transit systems
- Reduction of dependency upon the automobile
- A high-quality pedestrian environment
- New destination for nearby neighborhoods and people using transit systems
- Quality of life

Figure 218: Corridor high-density residential mixed use (Source: Author)

2. Secondary transit feeder systems

Secondary transit feeder systems are accessible within a distance of one to two blocks. Red Line is from the future transit system at Ala Moana. Blue Line is from the University of Hawaii. As these two lines have a potential to carry a large number of people to Makiki, they should run more frequently than other lines on dedicated lanes.

Red Line (Ala Moana - Makiki Line) - Run every 5 minutes

Blue Line (College Line) - Run every 5 minutes

Major Node

Figure 219: Secondary feeder system Map (Source: Author)

Figure 220: Perspective view at the major node (Source: Author)

3. Zoning change

AMX should be introduced in Makiki, as it is desirable to maintain the character of Makiki primarily as an apartment neighborhood along Wilder Avenue. Based on the mixed use analysis, corridor high-density residential mixed use is suitable for Makiki. Therefore, parcels along Wilder Avenue should be converted into AMX-2 and AMX-3. AMX-3 should be applied to high-density area along wilder between Keeaoumoku Street and Pensacola Street, as this section is the most active area. AMX-2 should be applied to the rest of the area which is mid-density along Wilder Avenue, and parcels along Keeaoumoku Street and Pensacola Street, as Red Line (Ala Moana - Makiki Line) runs along those streets.

- AMX-2 (Mid-density Apartment mixed use District)
- AMX-3 (High-density Apartment mixed use District)
- A-1 (Low-density Apartment District)
- A-2 (Mid-density Apartment District)
- R-5 (Residential District)
- P-2 (General Preservation District)
- Historical Buildings

Figure 222: Zoning change (Source: Author)

4. Parcel consolidation

Existing narrow parcels along Wilder Avenue

Many buildings along Wilder Avenue are developed on the original narrow parcel configurations and zoning. These narrow lots have caused their structures to be oriented sideways yielding a blank wall to the street.

Figure 223: Narrow parcels along Wilder Avenue (Source: Author)

Figure 224: Area "A" in the map above (Source: Author)

Figure 225: Area "B" in the map above (Source: Author)

Parcel consolidation

Parcel consolidation is highly recommended in Makiki as a number of parcels are narrow along Wilder Avenue yielding blank wall to the street.

Figure 226: Existing condition (Source: Author)

Figure 227: Proposed condition (Source: Author)

When parcel consolidation is not possible

Even when parcel consolidation is not possible, it is encouraged to provide openings or storefronts facing Wilder Avenue to foster pedestrian friendly streetscape.

Figure 228: Existing condition (Source: Author)

Figure 229: Proposed condition (Source: Author)

5. Zoning modification

Existing maximum heights in Makiki

Approximately 70% of Makiki is zoned as A-2 (Medium-density Apartment district). Maximum height for A-2 is usually 150 feet. However, Makiki is located within Punchbowl special district and maximum heights are designated as follows:

Figure 230: Maximum heights (Source: Author)

Maximum building area, density, and height in AMX-2 zone

The modification is based on the implementation strategy in Chapter 5.

- The building area is maximized
- Parking requirement is met, also used for shared parking
- Density is increased according to the open space provided
- Maximum height is increased by 10 feet according to the height setback provided

The yellow box shown in the figure 234 represents the building envelope of existing maximum height and setback.

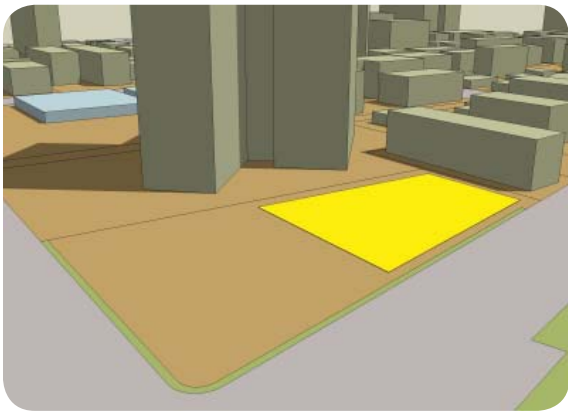


Figure 231: Existing maximum building area (Source: Author)

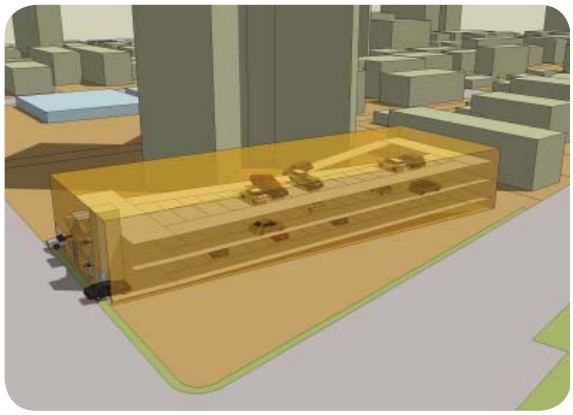


Figure 232: Parking structure provided (Source: Author)

Figure 233: Proposed building (Source: Author)

Figure 234: Maximum height and setback (Source: Author)

Maximum building area, density, and height in AMX-3 zone

The modification is based on the implementation strategy in Chapter 5.

- The building area is maximized
- Parking requirement is not met = use shared parking in other buildings if needed
- Density is increased according to the open space provided
- Maximum height is increased by 60 feet according to the height setback provided

The yellow box shown in the figure 238 represents the building envelope of existing maximum height and setback.

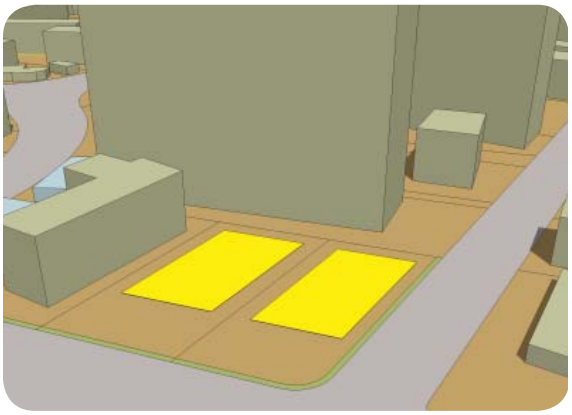


Figure 235: Existing maximum building area (Source: Author)

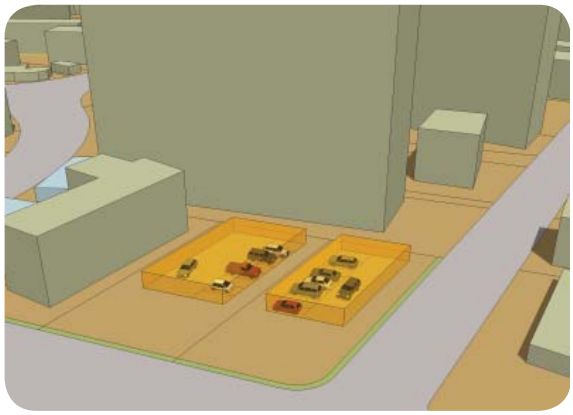


Figure 236: On-grade parking provided (Source: Author)

Figure 237: Proposed building (Source: Author)

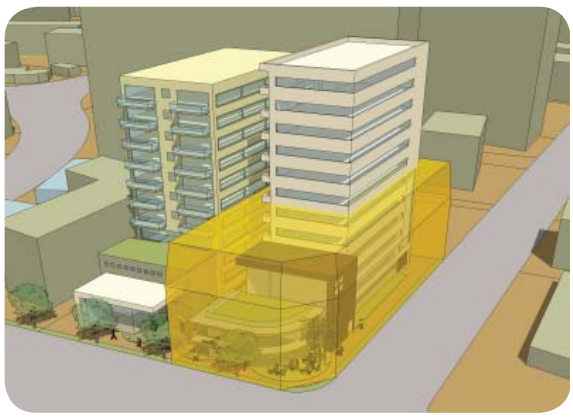


Figure 238: Maximum height and setback (Source: Author)

Benefits of height setback

- Reduce the pressure of the volume of the buildings for the pedestrians on the street
- Enhance more natural lighting
- Provide privacy for the residential area above
- Provide a space for roof top gardens

Figure 239: Reduce pressure + Enhance more lighting (Source: Author)

Figure 240: Provide privacy + Roof top gardens (Source: Author)

6. Parking

Amount and Location

One of the serious problems in Makiki is lack of parking. It seems that the amount of parking should be drastically increased. However, as stated in Chapter 5 and 6, the amount of parking does not have to meet the existing requirement because of the future transit system and secondary feeder system, thus Makiki is transformed from car oriented to pedestrian oriented neighborhood.

Assuming that Makiki is introducing mixed use, additional parking for the visitors is necessary. Parking structures can be distributed in the area to encourage people to walk, use transit, and increase their interactions. However, in the case of Makiki, there are only few parcels that are large enough to build a parking structure. Therefore, it is proposed to provide a large parking structure on the parcel close to the node. As the node is in the middle of Wilder Avenue, the location of the parking structure is convenient for the visitors or the residents.

Figure 242: Location of on-street and off-street parking (Source: Author)

8. Diversity of architectural styles and building types

It is important to provide various architectural styles and building types in order to enhance the characteristics and avoid a homogeneous streetscape in Makiki. However, as stated in Chapter 6, it is extremely difficult to control architectural style and design. It is also hard to define what is good design and what is not especially when there are very few examples in the neighborhood. The best way would be to create one or two noticeable buildings in the area so that others can follow those buildings as precedents.

The figures below are examples showing how a diversity of architectural styles and building types can make the streetscape interesting and vibrant. This is especially so when buildings are:

- composed of multiple components instead of just one large single "box" volume
- integrated with public space
- properly landscaped
- provided with flat roofs that can be used for gardens

Figure 250: Architectural style 1 (Source: Author)

Figure 251: Architectural style 2 (Source: Author)

Figure 252: Architectural style 3 (Source: Author)

Figure 253: Architectural style 4 (Source: Author)

9. Landscape

Street trees

Street trees play important roles for a neighborhood, as they enrich the streetscape, provide shading, and provide pleasant walking experience. Although there are some street trees in Makiki at present, they are not playing their roles because they are not well maintained, and they are not planted continuously.

Landscaped medians are encouraged, as they provide more shading, soften the hard surface of the wide road, and they slow down the traffic in order to create a pedestrian friendly environment.

Figure 254: Landscape plan for street trees (Source: Author)

Figure 255: Existing condition (Source: Author)

Figure 256: Proposed condition (Source: Author)

10. Storefront

As stated in Chapter 6, storefronts play a great role in helping to attract people by providing visual complexity in the urban environment.

The physical design of the proposed mixed use corridor along Wilder Avenue would contribute to the overall image of Makiki. Good design of a storefront also gives distinctive characteristics and identity to the building and makes it valuable. Storefronts should be designed uniquely with good qualities based on the design guideline provided in Chapter 6 in order to attract residents, customers, and visitors, and provide a vibrant streetscape.

Figure 262: Storefront 1 (Source: Author)

Figure 263: Storefront 2 (Source: Author)

Figure 264: Storefront 3 (Source: Author)

Figure 265: Storefront 4 (Source: Author)

11. Conclusion

Evolving identity over applied identity

The initial purpose of this project was to investigate the methodology of creating an identity in a neighborhood. However, it is learned throughout this project that an identity should not be applied in a specific way, but it should evolve over time with people in different places. For example, it is not appropriate to create a Japan town just because the dominant cultural background in a neighborhood is currently Japanese. In 10 years, the dominant cultural background may become Chinese or Korean. As trends change, it is important to create flexible and timeless places where identity can evolve over time in a neighborhood.

It is stated in Chapter 4 that there are three important factors that make an identity. In fact, they are the factors that create places where identity can evolve. The three factors are culture, public space and activities. These important factors can be measured by five basic elements; diversity, experience, appearance, comfort, and flexibility. By using the identity measurement tool in Chapter 4, it is possible to observe how the implementation strategies in Chapter 5 and 6 is applied to the design scenario in Makiki in Chapter 7 and whether they work well or not for creating places where identity can evolve in a neighborhood.

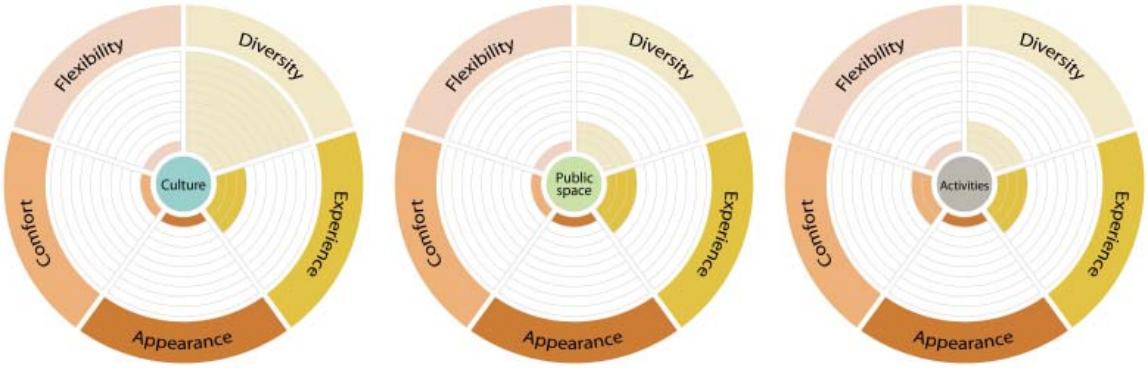


Figure 266: Existing Makiki - Three factors that create places where identity can evolve (Source: Author)

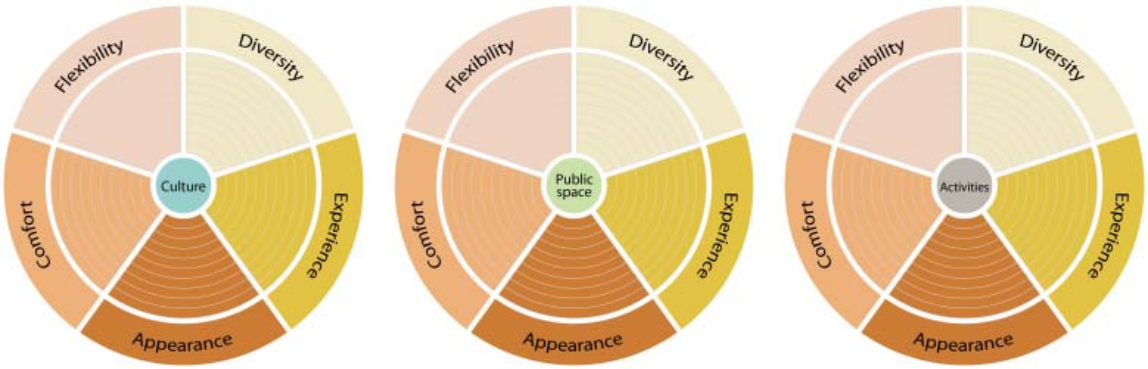


Figure 267: Proposed Makiki - Three factors that create places where identity can evolve (Source: Author)

Culture

Diversity

The residents in Makiki have diverse cultural backgrounds consist of Japanese, Caucasian, Chinese Korean, Hawaiian, Filipino, Vietnamese, African American, Mixed, and others. Mixed use along Wilder Avenue provides more opportunities for both residents and visitors to interact and express their diverse cultures in Makiki. - 10 points

Experience

Different types of commercial uses and public spaces along Wilder Avenue provide a variety of cultural experience such as different kinds of restaurants that serve different types of cultural food, street markets that provides a variety of goods and foods from different cultures, or open spaces for cultural events. - 10 points

Appearance

Different architectural styles and building types play an important role in providing attractive appearance for the streetscape along Wilder Avenue in order to foster cultural experience and achieve enjoyable walking experience. Mixed uses within the different building types also provides a vibrant image to the streetscape. -10 point

Comfort

Height setback provides opportunities for more semi-public spaces such as roof top gardens. This type of space enhances comfort and privacy, as it is separate from the busy public sidewalks. It also can be used for private cultural events or parties so that people can comfortably interact without being distracted from the public crowd. - 10 point

Flexibility

Wide sidewalks have a flexibility for different purposes in order to achieve a vibrant streetscape and cultural interaction such as outdoor dining, street markets, or street performance. The plain design of building facades and storefronts is also flexible for any types of commercial use or cultural backgrounds. - 10 point

Public space

Diversity

A diversity of public spaces provides opportunities for the residents and visitors in Makiki to gather and interact such as large parks, pocket parks, outdoor dining, plazas, or wide sidewalks. In order to achieve great public spaces, it is important that there are different destinations and people can make choices from different options. - 10 points

Experience

Different types of public spaces provide different experiences. It is also important that one public space can provide multiple experiences. For example, the park provides a water feature for adults to visually enjoy and for kids to play. It is also for exercising, picnic, or just reading books under the shading trees. - 10 points

Appearance

Landscape plays an important role in providing an attractive appearance and pleasant environment of public spaces. Well designed landscape with a variety of beautiful plants provides visual comfort as well as spatial definition. It also cultivate the cultural awareness and creates connection between people and nature. -10 point

Comfort

Public spaces should provide comfort such as seating for people to take a rest and relax after or in between their activities. Cafe can provide a space for people who want to take a break after shopping. Street trees provide comfortable shading for the pedestrians. A water feature provides visual comfort and cooling effect. - 10 point

Flexibility

Public space should be flexible for different purposes in order to achieve a vibrant streetscape and foster cultural interaction. Those spaces include open lawn area, wide sidewalks, or plazas. Seating in this type of public space should be movable so that they can be removed for a purpose that requires a large open space. - 10 point

Activities

Diversity

There are different activities especially at the node. Makiki District Park provides a number of activities including gardening, running, soccer, basketball, tennis, swimming or skateboard. The mixed use provides other activities such as gathering, interacting, shopping, dining, working, or just walking along Wilder Avenue. - 10 points

Experience

A variety of activities provide different experiences for both residents and visitors. The experiences in the pocket parks is different from the experiences in Makiki District Park. Different types and mixture of commercial uses in different building types provides a vibrant streetscape and enjoyable walking experience. - 10 points

Appearance

A variety activities play an important role in providing attractive appearance. In order to achieve a vibrant streetscape, it is important that different activities can be seen from the street. Mixed use and different types of public spaces along Wilder Avenue provide different activities and make the street enjoyable and exiting. -10 point

Comfort

The secondary transit feeder system plays and important role in supporting the activities along the mixed use commercial corridor along Wilder Avenue. As the secondary feeder system runs every 5 minutes, people can easily catch it and travel comfortably along Wilder Avenue and get wherever they want. - 10 point

Flexibility

There are a variety of flexible public spaces that allow different types of activities such as open lawn area, courtyards, plazas, or wide sidewalks. Wide stairs also could be used for different types of activities other than just going upstairs or downstairs, such as seating for street performance, outdoor concert, or just hanging out. - 10 point

This project is a starting point

The purpose of this project is to investigate the methodology of creating a neighborhood where identity can evolve. It is not intended to act as a totally new standard replaced with the existing standard, but as a trigger for different individuals related to the neighborhood to think about different possibilities to make their neighborhood into a great place. Most residents want to make their neighborhood into a better place. However, a lot of them do not know the methodologies or the possibilities to make it happen.

One way is to educate the residents by presenting this project to a neighborhood board. Another way is to present it to the City and County of Honolulu in order to provide another view point for a neighborhood, as they are occupied with the existing condition and typical methodology. When they are inspired by this project, they could hire developers or planners to actually start detailed research on the neighborhood and come up with a master plan.

The next step is to hire good architects to design new buildings or renovate existing buildings. It is also ideal to hire Landscape architects and work together with the architects, as landscape should be designed professionally and integrated with the buildings and public places in order to create pleasant and enjoyable spaces suitable for the urban environment. However, projects often change over time during the process because of the budget or time and do not accomplish the initial goal. Therefore, a design review team elected based on the criteria of this project could monitor the process of the planning and designing in order to achieve the initial goal.

As stated in Chapter 1, neighborhoods in Honolulu have become homogeneous and it is difficult to make changes of existing methodology that is efficient, but not unique because of developers desire to maximize profits and planners use of efficiently repeatable housing models. However, the relationship between a neighborhood and cultures, or people and their environment cannot be viewed in a deterministic or simplistic manner. I strongly wish that this project could become a key to open the door to another perspective for different individuals and help them create a neighborhood where identity can evolve.